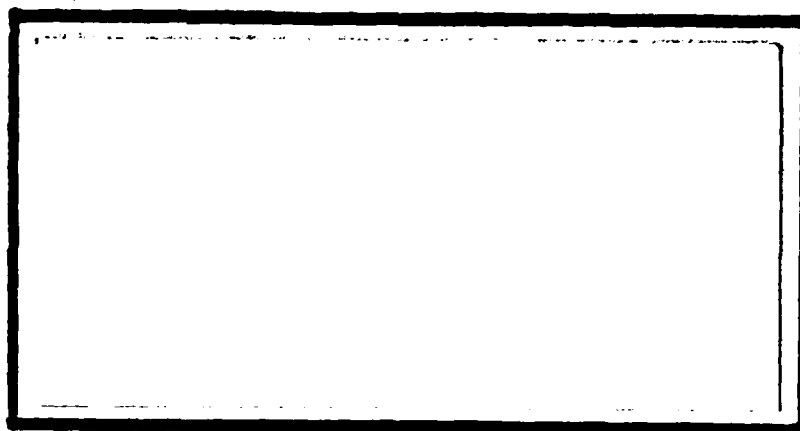


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AUTOMATING THE AIR FORCE RETAIL-LEVEL  
EQUIPMENT MANAGEMENT PROCESS:  
AN APPLICATION OF MICROCOMPUTER-BASED  
INFORMATION SYSTEMS TECHNIQUES

THESIS

Jeffrey Bailey  
Captain, USAF

AFIT/GLM/LSM/88S-1



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INFORMATION SYSTEMS TECHNIQUES**

**THESIS**

**Presented to the Faculty of the School of Systems and Logistics  
of the Air Force Institute of Technology**

**Air University**

**In Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Logistics Management**

**Jeffrey Bailey, B.A., M.P.A.**

**Captain, USAF**

**September 1988**

**Approved for public release; distribution unlimited**

### Acknowledgments

When John Donne said "No man is an Iland, intire of it selfe..." (Coffin, 1952:441), he spoke an eternal truth, not only in the context in which his words are couched, but also in the context of human accomplishment. Indeed, like all human endeavors, the accomplishments documented in this study are the result of a team effort. Some of the members of this team were especially giving of themselves and their contributions are acknowledged below.

I would like to express my sincere appreciation to Lieutenant Colonel John Halliday, my thesis advisor, for his patience and understanding in helping me to learn and grow over the past year. Thanks are also due to Lieutenant Colonel Bruce Christensen, my academic advisor, for his moral and intellectual support as I looked for the answer to the age old question "Why, oh why, are there only 24 hours in the day?"

Perhaps the most wonderful aspect of an AFIT education is the cohesion which develops among peers. I am proud to be a member of the 10-person team forever known as GIM 88S. Thanks to Bill Cameron, Alan Closson, Barbara Cohen, Bob Degroot, Phil Frederick, Chris Hebner, Steve Melroy, Tim Mills, and Tom Mitchell for the friendship and support they have provided throughout our 15 months together. Dear friends: Godspeed in your future endeavors!

Unfortunately, the title page to this thesis carries only one name, yet a second person was essential to its

completion. Darling [REDACTED] friend, confidant, and lover,  
thank you for your love, understanding, confidence, and  
strength. After nine years together, I still love you; more  
important, I am still in love with you. I am more convinced  
than ever that, together, we can do anything.

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Abstract

Microcomputer-based database management systems can reduce training times and error rates on administrative tasks in many work areas. Workers in many organizations could use the assistance of a microcomputer-based management information system. However, adequate system design and development requires in-depth knowledge of the tasks to be automated, and can require hundreds, even thousands, of hours to complete. Often, technicians assigned to a work area do not have the knowledge or time to devote to the design and development of an information system. One such work area is the Equipment Management Section in the Air Force base supply organization. The purpose of this study was to apply principles of database management to the management of equipment items, with the ultimate goal being a reduction in error rates and training times.

The study was conducted using a series of seven stages of information systems design advocated by Senn (Senn, 1984:18). These stages require a thorough examination of the problem and problem environment prior to design and development of the information system. Accordingly, five research questions designed to help the researcher gain a thorough understanding of the Equipment Management Section and the environment in which it functions were asked and answered. Then, a management information system was designed, developed, and tested.

The management information system is called the Equipment Management Information System (EMIS). EMIS automates four tasks formerly accomplished manually. These tasks were found to contribute to high error rates and extended training times in the Equipment Management Section. The tasks are the Air Force Form 600 Control Log, Tables of Allowances Review List, Configuration Data/Resume File, and the Equipment Custodian List. Air Force Logistics Management Center Directorate of Supply personnel have agreed to validate EMIS and distribute it to interested major commands.

AUTOMATING THE AIR FORCE RETAIL-LEVEL  
EQUIPMENT MANAGEMENT PROCESS:  
AN APPLICATION OF MICROCOMPUTER-BASED  
INFORMATION SYSTEMS TECHNIQUES

I. Introduction

Overview

The introduction of the first electronic computer, ENIAC, in 1946 (Robbins and Braly, 1987:2) began a revolution of change in the world as human beings view it. Changes in almost every area of society have been directly, or indirectly, brought about by the computer. As this 'information revolution' began to reach into our daily activities, Alvin Toffler wrote

Recently, the computer has touched off a storm of fresh ideas about man as an interacting part of larger systems, about his physiology, the way he learns, the way he remembers, the way he makes decisions. Virtually every intellectual discipline from political science to family psychology has been hit by a wave of imaginative hypotheses triggered by the invention and diffusion of the computer--and its full impact has not yet struck (Toffler, 1970:29).

Toffler's words are quite prophetic. Indeed, since the late 1970s, when mass production of microcomputers began, the computer has become much more than a tool for managing finances and inventories and truly has touched every aspect of our lives.

Computers can do a tremendous amount of work in a short period of time. They are well suited to the accomplishment

of repetitive tasks which require a great deal of accuracy...just the sort of task that human beings are not particularly good at accomplishing consistently. Computers can provide information to people who need that information in order to manage processes and make decisions. Before the widespread use of computers, large amounts of information were generally available on paper only. The distribution of information was hampered by the limitations of our transportation systems. Furthermore, information of a similar nature published by two or more sources was difficult to bring together. Today, using computers and telephone lines, thousands of pieces of data (the words 'information' and 'data' will be used interchangeably in this thesis) can now be transferred around the world in a few minutes.

In addition to their ability to transfer data, computers are capable of cataloging data so that it can be linked with information of a similar nature and provided to users in an organized manner. This cataloging function is usually accomplished by organizing the information in databases. A database 'is a collection of data which are shared and used for multiple purposes' (Martin, 1981:2). Databases store information in a strict, defined format so that people who need the information can find it, extract it in a usable form, and summarize it. Databases usually must serve the needs of many different users, and most users need only small amounts of information at any given time. Therefore, computer programs are written to help users

access databases and extract only the information which they need. A database management system (DBMS) is a program or a number of programs which manage databases so users don't have to perform the management function (Pratt, 1988:6).

Prior to the advent of microcomputers, often called PCs (an abbreviation of Personal Computer), users of information needed the assistance of programmers and computer operators to access databases and extract the desired information. This began to change in the early 1980s with the proliferation of PCs and sophisticated microcomputer-based DBMS software (Banet et al, 1985:10). Today, PC users themselves, not computer professionals, often build databases and write programs to select, sort, summarize, and perform calculations on the data in those databases (Banet, et al: 1985,5). While building databases and writing programs are time consuming activities which require knowledge and skills gained from reading and experience, the DBMS software available today allows motivated individuals with no formal computer training to accomplish these tasks. However, there are still many work areas which do not use available computing power to accomplish repetitive information management tasks at which computers are capable and efficient. One of these work areas is the Equipment Management Section (EMS) in the Air Force base supply organization (Kendall, 1987; Naehring, 1988).

## Background

Technicians assigned to the EMS generally experience longer training periods and receive more negative findings from Management/Unit Effectiveness Inspection teams than technicians assigned to any of the other sections in the Standard Base Supply System (SBSS) (Kendall, 1987; Reuwer, 1988). Air Force Logistics Management Center (AFLMC) personnel believe that inefficient policies and procedures and a lack of an adequate DBMS for equipment management technicians combine to complicate training and increase error rates (Kendall, 1987). Reuwer emphasized that a ten percent reduction in error rates will result in lower expenditures for equipment items, shorter cycle times from customer request to customer receipt of equipment items, and as much as a 20 percent increase in mission support by the EMS (Reuwer, 1988). With the goal of reducing administrative errors in the EMS, AFLMC personnel developed a project plan to study retail-level equipment management and automate selected procedures currently performed manually. However, due to manpower limitations, this project has not been accomplished.

## Statement of the Problem

Many Equipment Management Sections experience unacceptable error rates and extensive periods of training before new personnel are considered proficient (Kendall, 1987; Wilson, 1988a). A study was conducted to determine those procedures which contribute to these problems.

Procedures identified as contributing to error rates or extended training times were analyzed and a determination made concerning the appropriateness of automation using database management software hosted on a microcomputer. Selected procedures were then automated using a commercially available DBMS software package.

### Research Objective

The purpose of this study was to apply principles of database management to the management of equipment items, with the ultimate goal being a reduction in error rates and training times. The plan was to automate selected manual equipment management procedures on a microcomputer. Procedures selected for automation met the following criteria:

1. A majority of those interviewed believe that the current procedure adversely impacts mission accomplishment by increasing training times and/or error rates.
2. Automation is judged, by the researcher as well as those interviewed, to be a reasonable approach to improving the procedure in question.
3. Automation is judged, by the researcher, to be feasible within time and resource limitations.

### Research Questions

In order to accomplish the research objective, several questions were asked and answered. Those questions are listed below:

1. What retail-level equipment procedures result in extended training times or unacceptable error rates?
2. Which, if any, of those procedures found to result in extended training times or unacceptable error rates can be automated by developing microcomputer-based application programs?
3. Which, if any, of those procedures found to be feasible for automation are already in the process of being automated by Air Force organizations?
4. Which database management software package is most appropriate for the automation of selected equipment management procedures?
5. How can those procedures which are automated during this study be fielded to ensure maximum effectiveness and efficiency in their distribution, maintenance, and improvement?

#### Scope of the Study

This study was limited to the Air Force Logistics Command (AFLC), the Strategic Air Command (SAC), the Air Training Command (ATC) and the Air University. Implementation of all application programs designed and written during this project was accomplished at the Wright-Patterson Air Force Base (WPAFB) Base Supply organization. This organization was chosen because of its proximity to the Air Force Institute of Technology (AFIT). Although resource constraints allowed implementation in only one organization prior to publication of this study, the programs produced

during this project will automate standard Air Force supply procedures and should have universal application to all Air Force base supply organizations.

### Limitations

One of the most interesting (and challenging) aspects of the Air Force supply system is that, for every rule there is an exception. For every procedure which is the general rule for management of supplies or equipment, there are some items which are managed differently. For example, communications-electronics equipment items are managed using more restrictive procedures than most equipment because these items often contain classified technology. Therefore, even after the automation of selected procedures, there will still be some equipment items which must continue to be managed using manual procedures.

A second limitation of this research is that all automation efforts will be made using stand-alone PCs and microcomputer-based, commercially available database management software. Until automated interfaces with other Air Force computer systems are available, a fully integrated Decision Support System (DSS) will not be feasible.

### Assumptions

The following assumptions were made concerning this research effort:

1. Equipment managers interviewed by the researcher can provide specific requirements for application programs to automate current manual procedures.

2. Potential users of application programs developed during this study have access to an Air Force standard small computer (Zenith Z-248) with at least one floppy disk drive, a 20 megabyte or larger Winchester disk drive, a printer, and the software needed to run these programs.

### Contributions of the Research

The automation of manual, inefficient procedures in the Air Force equipment management process is long overdue (Kendall, 1987). In the recent past, much attention has been placed on improving the management of Air Force non-equipment type, expendable items. This has resulted in tremendous cost reductions and some significant improvements in weapon system availability (Kendall et. al., 1987; Rexroad, 1988). No effort with a similar scope has been made to correct inefficiencies in the management of Air Force equipment items. Most equipment management procedures have been in effect since the early 1960s and are based on an early punch-card accounting system or have no computerized support at all (Kendall, 1987; Naehring, 1988). Equipment items are generally expensive, often directly impact weapon system availability, and are managed using procedures that were in effect before the advent of microcomputers. Therefore, it is reasonable to conclude that (1) the equipment management process can be significantly improved by automating selected manual procedures, and (2) improved procedures will result in cost savings and improved mission support.

Information gathered in an analysis of current equipment management policies and procedures provided the basis on which to make decisions about important system improvements. Procedures found to contribute to high error rates or lengthy training times became candidates for automation. To test the feasibility of automating manual equipment management procedures, application programs were designed, written, tested, and implemented.

#### Organization of the Report

This report is divided into five chapters. Chapter I provides the reader with an introduction to the research problem, a list of research questions, the limitations of the research, and assumptions upon which the research is based. Chapter II begins with an introduction to the Air Force supply system and then turns to a discussion of databases and DBMS concepts, and introduces a seven step process for designing and building information systems. Chapter III provides the methodology of the research. Chapter IV reviews the findings of the research, provides answers to the research questions, and discusses the functionality of the procedures automated during this study. Chapter V provides conclusions and offers recommendations for further work in this area. For the interested reader, the appendices contain more detailed information on the application programs developed during this study.

## II. Review of the Literature

### Overview

The purpose of this study was to apply principles of database management to the management of equipment items, with the ultimate goal being a reduction in error rates and training times. Therefore, this chapter provides an introduction to the Air Force supply system, with emphasis on the management of equipment items, and then turns to a discussion of databases, database management, and information system design techniques.

### Air Force Supply System

The Air Force supply system has two echelons, or levels. At the wholesale level, Air Force Logistics Command (AFLC) personnel determine requirements, prepare budget submissions, and procure, store, and distribute items for their customers, the base supply organizations around the world (Rexroad, 1987). At the retail level, supply technicians determine requirements, and requisition, store, and distribute items for their customers, the organizations affiliated with the base (Reuwer, 1988).

Each echelon of the supply system has its own policies and procedures, but there are important interfaces between the two. Automated interfaces connect the retail-level computer system, the SBSS, and several of the hundreds of AFLC computer systems, including the D032, the D039, the D041, and the D062. The D032 computer system handles the distribution of supplies and equipment, while the other

three systems perform requirements computation tasks for equipment, recoverable, and Economic Order Quantity items, respectively (Gaetano, 1988). There are other interfaces between the two levels, including telephone contacts, and written correspondence. However, these non-automated interfaces are used only when requirements at the retail level are urgent and remain unsatisfied.

#### Standard Base Supply System (SBSS)

The SBSS is the retail level of the Air Force supply system. Most Air Force bases have a base supply organization headed by a chief of supply, and divided into five branches: Management and Systems, Operations Support, Materiel Management, Materiel Storage and Distribution, and Fuels Management (USAF, 1987:Ch 2, 41).

Base supply personnel requisition property to stock in warehouses for future use and to issue to customers with immediate needs (Reuwer, 1988). Generally, these requisitions will be sent to one of the five Air Logistics Centers (ALCs) operated by AFLC. Other sources of supply include the General Services Administration (GSA), the Defense Logistics Agency (DLA) and Local Purchase (LP) contracts (Wilson, 1988a). Each item which is listed for stock is given a National Stock Number (NSN). NSNs, and their associated data elements, are used by retail level supply technicians to route requisitions to the correct source of supply, charge the correct costs to the customer, etc. An important data element associated with every item

is the three-digit alphanumeric Expendability, Recoverability, Repairability, Cost Designator (ERRCD), often called the ERRC Code (USAF, 1987:Ch 3, 114). This code classifies each item according to expendability and highest authorized level of repair.

There are three major types of items classified by the ERRC Code. Economic Order Quantity (EOQ) items are those which are consumed in use and are not repaired when they are no longer serviceable. Their location is not tracked after they are issued to the customer. Examples include paint, rivets, and wire. Recoverable items differ from EOQ items in that they are repaired when they are no longer serviceable. Their location is tracked by the SBSS using repair cycle and due-in from maintenance detail records. Examples include aircraft flap actuators, jet engine modules, and aircraft antennas. The third type of item is equipment. Unlike EOQ and recoverable items, equipment does not become part of a larger system. Equipment items are generally high cost items which do not lose their identity when in use, and they usually are repaired when they break (Bloom, 1988). Examples include bomb loaders, vehicles, computers, office furniture, and parachutes. When equipment becomes unserviceable, it can be repaired or sent to the Defense Reutilization and Marketing Office to be salvaged. High dollar value and sensitive equipment items are tracked by the SBSS with special computer records, called in-use detail records, kept on issued equipment items.

Equipment Item Management. The Equipment Management Section (EMS) is part of the Materiel Management Branch and is the base-level organization responsible for administration of the Air Force Equipment Management System (AFEMS) which:

provides AF equipment managers with uniform ways of handling equipment in all commands. It specifies procedures for virtually all aspects of equipment handling and record keeping (USAF, 1987:Ch 22, 15).

The term AFEMS, then, refers to the overall management of equipment in the Air Force. There are two other levels of management in AFEMS. Each Major Command (MAJCOM) has a Command Equipment Management Office (CEMO) which acts as the next level of management above the EMS. At the highest level of authority in AFEMS are the Materiel Management organizations at Headquarters AFLC and the five Air Logistics Centers (ALCs) (Kendall, 1987; Naehring, 1988). Personnel at all levels of AFEMS manage Air Force equipment by authorizing equipment issues and maintaining equipment accountability records (USAF, 1987:Ch 22, 15).

Equipment items are managed in a different manner from EOQ and recoverable items. While the EOQ and recoverable items are automatically ordered for stock when demand factors make it appropriate, equipment items are not generally stocked at the retail level (Johnson, 1987). Instead, Inventory Management Specialists (IMSs) decide, in conjunction with weapon system and other end item managers, the amount of each equipment item that an organization is allowed to have (Johnson, 1987). Each kind of equipment,

and the organizations allowed to have that equipment, are listed in a Table of Allowances (TA). TAs are updated regularly (usually at least annually, but some TAs are updated monthly), and are provided to the EMS on microfiche. TAs generally do not restrict allowances of low dollar value equipment items coded with an Equipment Management Code of 1, so these items, unlike most equipment items, are usually not maintained on SBSS accountability records after issue (Kendall, 1987).

Equipment custodians are full-time workers in base organizations (maintenance, personnel, transportation, etc.) who have been assigned the additional responsibility of managing equipment issued to their organization. While all Air Force employees, both civilian and military, are responsible for government property in their possession (USAF, 1984:1), equipment custodians are liable for lost, stolen, or damaged equipment for which they have taken custody (USAF, 1987:Ch 22, 44).

If an organization needs an equipment item, a request for authorization of that item is submitted by the equipment custodian to the EMS. If the TA contains an allowance of the equipment for the requesting organization, the EMS can approve an authorization and requisition the equipment. If no allowance exists, the request must be forwarded to the higher level organizations for review and approval prior to issue. Equipment items with an EMC other than 1 are tracked by the SBSS using in-use details (USAF, 1987:Ch 22, 13). When an equipment item is issued to an equipment custodian,

an in-use detail is created and the item is placed on that customer's equipment account. In-use details are used to track each custodian's inventory of equipment. When a change is made to the inventory, the custodian submits the necessary paperwork to update the computer records.

Equipment Management Data. The major documentation which retail-level equipment technicians work with can be categorized by its originator (Kendall, 1987). The paragraphs which follow discuss documentation originated by the requesting organization, the Management and Systems Branch, and the EMS itself.

Requesting Organization. There are two major types of documentation which flow from the equipment custodian to the EMS. The AF Form 601 is used when an allowance in the TA is lower than the allowance the requesting organization needs. The AF Form 2005 is used when the allowance in the TA is greater than, or equal to, the allowance the requesting organization needs.

The AF Form 601 is used to request equipment allowance changes. When approval authority for an allowance change is above the EMS (i.e., CEMO or AFLC), an AF Form 601 is submitted by the requesting organization through the EMS to the appropriate authority (USAF, 1987:Ch 22, 35). Only after the AF Form 601 is approved by the proper authority may the item be requisitioned.

The AF Form 2005 is used to request equipment authorization changes which do not exceed the allowances

published in the appropriate TA. The AF Form 2005 is submitted by the requesting organization to the EMS. Alternate media to the AF Form 2005 include telephone, radio, and walk-in requests (USAF, 1987:Ch 22, 32). Civil Engineering organizations may use the AF Form 1445 instead of the AF Form 2005.

Management and Systems Branch. There are also many documents which flow into the EMS from the Standard Base Supply System computer. These reports are distributed to the EMS by the Management and Systems Branch and are generally used to reconcile SBSS and AFLC computer records with records kept by the EMS. A discussion of these products used by EMS technicians follows:

The D04, Daily Document Register (USAF, 1987:Ch 5, 54). Technicians must ensure auditable documentation is provided to the Document Control Section.

The D06, Daily Transaction Register (USAF, 1987:Ch 5, 83). Technicians must ensure transactions processed the previous workday have been accepted by the SBSS. Transactions not processed should be researched and processed.

The D16, Daily Equipment Transaction Report (USAF, 1987:Ch 5, 124). Technicians must review this report for input errors and make necessary corrections. Since the information contained in this report is provided to AFLC for reconciliation of wholesale and retail equipment transaction records, it is very important for the report to be correct.

The M06, Vehicle Asset Listing (USAF, 1987:Ch 5, 267).

Technicians must review the report for errors in vehicle inventories and make necessary corrections.

The M14, Stock Number Directory (USAF, 1987:Ch 5, 309). Technicians use this report in the course of processing equipment requests to determine, among other things, whether an item record already exists in the SBSS for a requested piece of equipment.

The Q09, Allowance Source Code Listing (USAF, 1987:Ch 5, 549). Technicians use this report to perform Tables of Allowances reviews, to ensure that authorizations do not exceed allowances, customers are using the correct Allowance Source Codes (ASCs), and identify equipment excesses held under ASC 000. Since TAs are continually changed and updated, it is common for a custodian to lose an allowance for a piece of equipment. When a problem is found, EMS technicians must direct turn-in of excesses or have the custodian submit an Air Force Form 601 to change the allowances.

The Q10, Equipment Out-of-Balance Listing (USAF, 1987:Ch 5, 556). This report notifies the EMS that the quantity on order or in use is different from the quantity authorized. Technicians must review for out-of-balance entries and take appropriate action to have equipment custodians turn-in or justify situations where authorizations exceed allowances.

The R14, Custodian Authorization/Custody Receipt Listing (CA/CRL) (USAF, 1987:Ch 6, 218). This report is

forwarded to the appropriate equipment custodian. Custodians reconcile their inventory records with actual inventory, sign the listing, and return to the EMS. If discrepancies are found, appropriate action must be taken (e.g., equipment may have been physically transferred to another account, damaged, etc., and paperwork must be filed to reflect the changes). The R14 with custodian's signature is filed in the EMS.

Equipment Management Section. Finally, there are a number of documents used by equipment management technicians which are created in the EMS and are used to manage the flow of documentation through the section, and to increase the speed and accuracy of the processing of customer requests.

The Air Force Form 600, Equipment Control Register, is used by the EMS to track requests for authorization or allowance changes by equipment custodians (USAF, 1987:Ch 22, 41). The form provides the EMS with the capability to ensure that all requests are handled within required timeframes.

The Configuration Data/Resume File is used to track the characteristics of base organizations to insure correct authorizations for equipment are processed (USAF, 1987:Ch 22, 34). Information on this form would include such data as the number of personnel authorized, and a summary of the organization's mission. The content and format of this form are determined by each major command.

Approved Air Force Forms 601 are required to be kept in

a file in order to maintain an audit trail of equipment transactions. A certified list of these documents may be used by EMS technicians as a substitute for a copy of each individual form (USAF, 1987:Ch 22, 40).

The Equipment Review and Authorization Activity (ERAA) list of technical advisors is a list of experts in the subject areas pertaining to equipment (USAF, 1987:Ch 22, 27). For example, the Base Copier Monitor in the Base Administration Office would be on this list, as would one or more data automation technicians familiar with the Air Force small computer contract. These people would be called on to coordinate equipment requests pertaining to their area of responsibility and expertise. The content and format of this list are locally determined by each EMS.

The Challenge. Equipment management at the retail level has always been challenging because there are several dozen major TAs, there is a large body of written policy (AFM 67-1, Volume II, Part Two, Chapter 22 alone is 359 pages), and much of the work entails reviewing and updating paper or computer punch card files. Equipment management has become significantly more difficult in this decade because the prevailing philosophy of senior supply managers has been to bring certain equipment items, which had previously been managed by other organizations, under the umbrella of the EMS (Reuwer, 1988; Wilson, 1988). Examples include Special Purpose Recoverables Authorized Maintenance (SPRAM), Communications-Electronics Authorization Program

(CAP) equipment, and small computers and word processing equipment (Wilson, 1988).

The state of the art in computer hardware and software is changing and improving very rapidly. Equipment managers will eventually reap the benefits of many of the improvements which have recently been made, or are in the offing (Bloom, 1988; Harding, 1988a). There is a great deal of work being done by the Air Force to improve the capabilities of IMSs managing equipment at the wholesale level, and to improve the computerized interfaces between the AFLC systems and the SBSS. Some of the improvements to the equipment management process which are contemplated include the following (Harding, 1988a; Harding, 1988b):

- (1) Eliminating microfiche as a medium for TAs and, instead, providing TAs on compact disks directly readable into the SBSS;
- (2) Structuring TAs into relational databases so that any information a TA contains will be available to equipment management technicians quickly and accurately;
- (3) Providing procedures on-line rather than on paper, and indexing those procedures so that even inexperienced equipment management technicians will be able to find the appropriate information among the hundreds of pages of directives;
- (4) Automating communication between the three levels of AFEMS and eliminating the mailing of paperwork and the resulting delays; and
- (5) Linking microcomputers directly to the SBSS computer and

providing specialized software for transfer of data between the two.

Unfortunately, sweeping improvements like those listed require a great deal of money, manpower, and time to complete. In fact, most of the improvements listed above are not expected to be implemented until 1993 and beyond (Harding, 1988a; Harding, 1988b). Specialized hardware and software improvements are needed to reduce the paperwork, accelerate the authorization review and computer input processes, and provide sophisticated error-checking capabilities. Until equipment managers are provided with these new capabilities, they must deal with day-to-day problems by increasing the efficiency of their operations. This they can do by thoroughly training their people and by instituting system improvements which they have the capability and authority to make (Kendall, 1988; Harding, 1988c). While equipment managers do not have the authority to automate the interfaces between the PCs they have in their offices and the SBSS mainframe, they may use their PCs to improve any retail-level equipment management procedure (Kendall, 1988; Harding, 1988c).

#### Databases and Database Management

Databases accomplish at least six functions which allow computer users to enter, view, edit, and delete data more effectively, efficiently, and safely than before their development. They (1) allow information to be entered and stored efficiently, (2) protect data with error-checking and

consistency-checking functions, (3) protect against unauthorized access to the data, (4) reduce the impact of computer software errors, (5) allow the data to be maintained independent of the application programs which use the data, and (6) maintain current data in a central location so application programs can extract and use the data (Banet, et al: 1985,5).

Database management essentially concerns six tasks which either change the contents of the database or provide information to the user. These tasks are (1) adding data to the database, (2) editing data already in the database, (3) deleting data from the database, (4) sorting the database according to user needs, (5) searching the database for specific information required by the user, and (6) printing information contained in the database (Simpson: 1986,5).

Data are stored in a database in records. Records, in turn, are made up of a series of fields (Tsichritzis and Lochovsky: 1977,21). For example, the SBSS contains many different types of records including item records and detail records. A single item record in the SBSS consists of all of the basic data pertaining to a stocklisted item of supply or equipment. These data (NSN, ERRCD, Unit Price, Unit of Issue, Warehouse Location, etc.) are contained in fields within the record.

There are three types of DBMSs generally available (Elbra: 1982,25). These are the hierarchical, network, and relational models.

An example of a hierarchical model would be a family tree consisting of mothers and daughters only. Each daughter can have only one mother, yet every mother can have many daughters. A hierarchical system works the same way in that each record can only be linked to one 'parent' record, but it can be linked to many 'child' records. An important disadvantage to the hierarchical model, which makes it useful in a limited number of situations, is that horizontal relationships are not possible (Elbra: 1982,25). In other words, while the vertical relationships between parent and child records are contained in the database, there are no relationships between records which are not parent and child.

While the hierarchical model allows only one parent record for each child, the network model does not have this restriction (Elbra: 1982,33). The network model, unlike the hierarchical model, allows complex relationships between records to be defined. Unfortunately, due to its complexity, the costs of the network model in terms of disk space, computer time, and programmer time are much greater than for the other models (Elbra: 1982,35).

The most common type of database structure is the relational model (Harding, 1988b). The relational model is based on the concept of flat-files discussed below. In relational databases, these flat-files are called tables. Each record within a table is linked to the other records in that table by virtue of the fact that they contain the same fields. Similarly, records stored in different tables are

linked by common fields called key fields (Elbra: 1982,44). For example, in the SBSS, item records are contained in one table and in-use detail records are contained in another table. These records are linked by the key field, the MSN. Relational databases are easily changed and updated, but they require that some data (the key fields) be kept in more than one place in the system (Elbra: 1982,46).

Databases which are logically organized into two-dimensional tables where each row is a different record and each column is a different field are called flat-files (Tsichritzis and Lochovsky: 1977,21). The SBSS databases use a flat-file structure (Harding: 1988c). The flat-file structure is easy for most people to understand because we encounter examples of this structure often. Bank statements, cash register receipts, and address books are all examples of flat-files.

Properly structured databases require the data to be in third normal form (3NF) (Pratt, 1988:73. Databases which are in 3NF have all data elements which are not keys functionally independent of each other and dependent on the primary key (Martin, 1983:141). For data to be placed in 3NF, it must be processed through the steps listed below (Martin, 1983:141)

1. Decompose all non-flat data structures into two-dimensional records.
2. For records whose keys have more than one data item, ensure that all other data items are dependent on the whole key. Split the records, if necessary, to achieve this.
3. Remove all transitive dependencies [data

elements which are not keys but which identify other data elements] splitting the record, if necessary, to achieve this.

### Information Systems Design

There are many articles and books which cover the design of information systems. Each of them divides this design process into a number of stages. The stages outline a series of tasks which must be completed in order to successfully design, develop, implement, and maintain a large information system. The same techniques which apply to a large-scale management information system (MIS) project will also apply, to a great degree, to a smaller project hosted on a microcomputer. The stages of the systems development life cycle are not discrete. Many of the tasks contained within each stage are repeated throughout the life cycle of an information system development effort, and one stage does not have to be complete before the next stage begins. One example of the stages of a systems development life cycle is listed in Table 1.

Table 1

Information Systems Development Stages (Senn, 1984:18)

---

- (1) Preliminary Investigation
  - (2) Determination of Requirements
  - (3) Development of a Prototype System
  - (4) Design of the System
  - (5) Development of the Software
  - (6) Systems Testing
  - (7) Implementation
- 

Preliminary Investigation. A preliminary investigation includes clarification of project requests, studies to determine technical, economic, and operational feasibility of the project, and approval of the project request by those in authority (Senn, 1984:18-19). In the Air Force, this stage includes meetings between system designers and the future system users to discuss project objectives, the preparation of the economic analysis, and the approval of the Secretary of Defense, Secretary of the Air Force, or a lower level commander, depending on the dollar value of the project (Fleser, 1987).

Determination of Requirements. Determination of requirements calls for an analysis of how work which the new information system will accomplish is currently done (Senn, 1984:20). This is accomplished by either (1) examining the origins and uses of data in the system, or (2) analyzing operational goals and decision making (Senn, 1984:111). In

addition, during this stage an inquiry is conducted into how the current system works, and what improvements need to be made. During this stage, a data dictionary which completely defines all data elements in the system should be created. In the Air Force, this stage culminates in the publication of the Functional Description (FD). The FD gives some background on the current system, and explains what the new system should be capable of doing (Johnson, 1987). To complete the requirements determination stage prior to automating portions of the retail-level equipment management process, an analysis of current system weaknesses is needed (Fleser, 1987).

Development of a Prototype System. System prototyping is usually accomplished only on very difficult, costly, high-risk projects. In these cases, a complete description of the system may not be possible to develop. To reduce risk and costs of system failure, a system can be prototyped to accomplish some of the most important functions the final system will need to perform (Senn, 1984:20-21). The Air Force has taken this approach for most of its large-scale information systems efforts. Generally, the Air Force accomplishes system prototyping by awarding contracts for system development to competing contractors (Fleser, 1987). Each contractor prototypes a system according to the system requirements documented in the FD. After an evaluation, the Air Force then chooses the contractor judged to have developed the 'best' prototype.

Design of the System. During the system design effort, analysts take the information gathered during the requirements determination stage and build a system which shows the logical flow of information through that system (Senn, 1984:21). Here, the logical or information-level design of the databases is accomplished. The user view of the databases is represented as a collection of tables, data are normalized, and key fields are defined (Pratt, 1988:94). Logical database design requires development of a database structure as human beings view it, not as the computer will view it. Internal and external interfaces should also be designed at this point. When an information system is being designed for Air Force use, a document called the System Specification (SS) is published after the FD has been approved (Fleser, 1987; Johnson, 1987). The SS documents the logical design of the new information system.

Development of the Software. Software development is the translation of the system requirements documented during the system design stage into computer code (Senn, 1984:21-22). In Air Force information systems development efforts the new system is coded by programmers using both the SS and input from the system designers who wrote the SS (Fleser, 1987).

Systems Testing. After the software is developed, it must be tested to ensure it (1) does what it was designed to do, and (2) has no unacceptable errors (Senn, 1984:22). If a system does not do what it was designed to do there have been some miscommunications between the end-users, system

designers, and software developers. In this case, the system will have to be changed or scrapped. This is very costly and particularly unfortunate because it can be avoided if the requirements determination and system design stages are done properly. In information systems development, it is unlikely that the software will work perfectly. Software is always in a state of development and change and must be maintained throughout the period of time it is used. Therefore, an information system will usually be implemented even if minor errors found during testing have not yet been corrected. Major problems will usually postpone implementation until they are corrected. The testing stage in the Air Force is accomplished by several groups of people (Fleser, 1987). The software developer will test the system to eliminate as many errors as possible before outside organizations use it. The end-users will often test the system, especially the user interface. System designers are responsible to validate that the software does what it was designed to do, and verify that the system is accurate. The validation effort will often be done by performing identical operations on both the new information system and the current information system (if one exists). The verification portion of the testing requires documentation of all errors found with an assessment of the importance of those errors.

Implementation. After validation and verification, the system is ready to be implemented. However, it is unlikely

that the system will work perfectly. The software will need to be maintained so improvements can be made to the system and errors can be corrected as they are discovered.

### Summary

A broad overview of the Air Force retail-level equipment management system, and a discussion of a method of information systems design and development have been provided in this chapter.

Equipment management is a complicated process which requires specialized training to properly, and in a timely manner, perform the administrative tasks required. There are three major contributors to the administrative workload at the retail-level of equipment management. These are the equipment custodian, the SBSS, and the EMS itself.

Finally, using a formal method of information systems design, like the seven-step method discussed in this chapter, we can expect to build a system which meets the needs of retail-level equipment managers and is both valid and reliable.

### III. Methodology

#### Overview

The accomplishment of the research objectives followed a series of steps based on Senn's stages of analysis and design of information systems. Some of the stages were more applicable than others to this project, so there was more emphasis in those areas. A timetable of the stages in the research process is shown in Table 2.

Table 2

Research Timetable

<u>Stage</u>	<u>Inclusive Dates</u>
Preliminary Investigation	Nov 87 - Feb 88
Determination of Requirements	Dec 87 - May 88
Development of a Prototype System	Not Applicable
Design of the Systems	May 88 - Jul 88
Development of the Software	May 88 - Aug 88
Systems Testing	Jun 88 - Aug 88
Implementation	Aug 88

#### Preliminary Investigation

During this stage, a review of the available literature on equipment management and information systems design was conducted. Literature reviewed included Air Force manuals, inspection reports, staff assistance visit reports, management and logistics journal articles, unpublished papers and briefings, and articles and books on database

management, systems design, and off-the-shelf DBMSs for microcomputers.

#### Determination of Requirements

When this project began, the general symptoms of high error rates and long training times in the EMS had been identified. During the Determination of Requirements phase of the project, the research focused on policies and procedures which managers and technicians believed were causing those symptoms. Data gathered from unstructured interviews were analyzed. Interview questions were developed using the guidelines set out by Sudman and Bradburn in their book Asking Questions: A Practical Guide to Questionnaire Design. Interviews were conducted with equipment management technicians assigned to the WPAFB Base Supply organizations and managers at all three levels of AFEMS: Base Supply, the AFLC, SAC, and AU CEMOs, and AFLC/MMMA. These interviews, combined with the analysis of equipment management documentation accomplished during the Preliminary Investigation stage, provided the information needed to answer the research questions.

#### Development of a Prototype System

Since the application programs developed during this effort have few external interfaces and were written for stand alone use, prototype systems in the strictest sense were not developed. Instead, during the design and development stages, several of the intended users of the

systems worked with the system designer to ensure each program met the users' needs.

#### Design of the System

The systems design efforts included close coordination with several equipment management technicians at WPAFB Base Supply and the CEMO team leader in the AFLC Directorate of Supply, AFLC/DSS. During this phase of the project, decisions concerning required data elements, normalization of the data, external interfaces, and output products were made. After details of each system were worked out, data flow diagrams were written.

#### Development of the Software

During this stage, a DBMS (dBASE III PLUS (tm)) was chosen. The system design work was then translated into dBASE III PLUS (tm) program code. While coding progressed, AFLMC/LGS committed to testing, maintenance and distribution of the system.

#### Systems Testing

System testing was accomplished by the users in the WPAFB Base Supply organization. Testing was also accomplished at AFIT by the system designer and a staff of volunteers. Three of the four system modules were fully operational by 31 August 1988. The fourth module, the Configuration Data/Resume File was still being tested and refined at that time. More testing will be conducted by AFLMC personnel in October 1988.

### Implementation

The system was implemented at WPAFB. The programs and have been given to the AFLMC for distribution throughout the Air Force. Program maintenance responsibilities have been turned over to the AFLMC.

#### IV. Findings and Discussion

##### Overview

This study consisted of two different types of tasks. First, a series of research questions was asked and answered. The goal of these questions was to gain information about the problems encountered on a daily basis by equipment management clerks, and to discover potential applications of computerized data management in the Equipment Management Section. The second type of task involved the application of information systems design techniques to equipment management responsibilities in an effort to provide automated tools to help reduce training times and error rates.

This chapter discusses the results of both types of tasks accomplished during the study. First, answers to the research questions will be provided. Then, the management information system developed during this study will be outlined.

##### Research Questions

The five research questions, along with a discussion of the information gathered to answer those questions, are contained in the following paragraphs:

Research Question One. What retail-level equipment procedures result in extended training times or unacceptable error rates?

Through discussions with experts involved at all levels of the field of equipment management, and through reviews of

Command Equipment Management Team (CEMT) staff assistance reports, many problems came to light. Generally, identified problem tasks are administrative procedures which require complete accuracy and are accomplished on a daily or weekly basis. Table 3 is a list of the seven major tasks found to result in high error rates or unusually long training times.

Table 3

Equipment Management Tasks Impacting Error Rates or Training Times

- 
- (1) Tables of Allowances Reviews
  - (2) Air Force Form 600, Equipment Control Register
  - (3) Configuration Data/Resume File
  - (4) Equipment Out-of-Balance Listing
  - (5) Air Force Form 601 Certified File
  - (6) Equipment Custodian File
  - (7) D16, Daily Equipment Transaction Report
- 

Tables of Allowances Reviews. The most often cited problem was the task of reviewing TAs. When a revised TA is published by AFLC, equipment technicians in the EMS must review the allowance changes to the TA and compare the Q09 to those changes. If the revised TA has reduced an allowance on an equipment item which has been previously authorized, then the EMS technician must inform the affected equipment custodian and direct turn-in of the equipment.

Unfortunately, the nature of manually comparing a TA, a product distributed on microfiche, with the Q09, a computer printout, is both a physical and a mental strain. The TA review process can take several weeks if many changes have been made to the TA (Wilson, 1988a). Since each base works with two dozen or more TAs, and TA revisions are made as often as monthly, the TA review process often requires more labor hours than any other single task in the EMS (Wilson, 1988a; Stackhouse, 1988a). A recent AFLC CEMT report makes the situation clear: "Table[s] of Allowance[s] (TAs) are not being reviewed within 30 days of receipt of new or revised TAs. This has been an ongoing problem...(AFLC, 1987:9)"

Equipment Control Register. The Air Force Form 600 Equipment Control Register was also cited often as a task associated with high error rates (Stackhouse, 1988b; SAC, 1987:8). The task requires close attention to detail as each equipment request must be logged in and tracked from the time it is delivered to the EMS until it is processed and the paperwork is returned to the equipment custodian (Anderson, 1988b). The log is handwritten and is often difficult to read; this results in it not being used to properly manage the flow of equipment requests through the EMS (Anderson, 1988b).

Configuration Data/Resume File. Another task which regularly is accomplished in error, and not kept current, is the Configuration Data/Resume file (Brown, 1988). While the format and contents of this file are left to the discretion of each major command, most of the people

interviewed agreed that this documentation is important to keep current (Wilson, 1988c; Brown, 1988). The more accurate the contents of this file, the better the EMS can serve organizational equipment needs (Anderson, 1988a. Most EMSs do not have a strong program to maintain an up-to-date Configuration Data/Resume file (Anderson, 1988a; Stackhouse, 1988c). For example, the 1987 CEMT report for Maxwell and Gunter Air Force Bases noted that the EMS was not maintaining configuration data on 23 supported organizations (Air University, 1987:13).

Equipment Out-of-Balance Listing. Similar to the problems with TA reviews and the Q09, the Q10 Equipment Out-of-Balance Listing requires technicians to reconcile discrepancies between allowances and authorizations. This is a difficult, time-consuming task which the more experienced technicians usually accomplish (Wilson, 1988b). Again, great attention to detail is required for this task (Wilson, 1988b; Stackhouse, 1988b). Every CEMT report reviewed noted equipment authorized for use but not allowed by the applicable TA. Proper use of the Q10, in addition to timely TA reviews, will preclude these discrepancies (Hopkins, 1988; Stackhouse, 1988b).

Air Force Form 601 Certified File. Major commands have the option of allowing subordinate EMSs to maintain a computerized listing of completed Air Force Forms 601 in lieu of a file of these documents. Many MAJCOMs have allowed their subordinate EMSs to make a local decision

concerning which option to use. Many bases have continued to maintain a file of completed Air Force Forms 601 (Stackhouse, 1988a). Unfortunately, these files get to be difficult to maintain in the correct sequence, and individual forms tend to get misplaced (Stackhouse, 1988a).

Equipment Custodian File. Equipment custodians and alternate equipment custodians must be trained in their additional duty before they sign for equipment (USAF, 1987:Ch 22, 43-44). They also must be replaced by a new custodian before they can be released to leave their organization. Unfortunately, it often happens that a custodian will rotate to a new base without a replacement having been appointed and trained (Brown, 1988). Part of the problem can be related back to the EMS records of equipment custodians, their training dates, and projected departure dates (Brown, 1988). Many EMSs do not keep equipment custodian information current and accurate (Hopkins, 1988). Without accurate information on custodians, however, the EMS cannot manage the exodus of equipment custodians (Brown, 1988).

Daily Equipment Transaction Report. Another recurring problem in equipment management is the daily D16 reporting (Hopkins, 1988; Stackhouse, 1988a). An error in the daily report can result in a freeze in all D16 processing for the base until the error is corrected (USAF, 1987:Ch 22, 138). While some of the problems bases experience with D16 reporting are due to antiquated AFLC computer systems, much of the problem could be eliminated

with better training and quality control in the EMS (Hopkins, 1988).

Research Question Two. Which, if any, of those procedures found to result in extended training times or unacceptable error rates can be automated by developing microcomputer-based application programs?

Criteria. The criteria used to answer this question centered on the availability of the required data and the capabilities of microcomputers, and are listed below:

(1) The task must be able to be solved using a stand-alone system. If a particular task could best be solved by automating the interface between AFLC computers and the SBSS computer system, it was deemed inappropriate to attempt to solve in this study.

(2) The task must be able to be solved on the Air Force standard small computer. Since EMSs already have these microcomputers, and there are no plans for equipment technicians to be issued more powerful hardware, any problem requiring upgraded hardware could not have been solved in the near term.

(3) The task must be solvable using a PC based DBMS. Since this study dealt with the feasibility of PC database applications to the EMS, it was necessary to limit problems to those which are appropriate for solution using a DBMS.

(4) Finally, the task to be automated must be one which is necessary to accomplish on a regular basis. The

reasoning here was that, since the design, development, and maintenance of a MIS is quite labor intensive, and therefore costly, only tasks which are required to be accomplished regularly should become candidates for automation.

Problem Analysis. The seven tasks outlined above were analyzed using these four criteria. Table 4 provides a list of the tasks found to be good candidates for automation.

Table 4  
Candidates for Automation

- 
- (1) Air Force Form 600, Equipment Control Register
  - (2) Configuration Data/Resume File
  - (3) Air Force Form 601 Certified File
  - (4) Equipment Custodian File
- 

Table 5 provides a two-dimensional view of the seven tasks and the criteria against which they were analyzed.

Table 5

Equipment Management Tasks Versus Automation Criteria

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	Stand- Alone?	AF Small Computer?	DBMS?	Regular Task?
TA Reviews	No	No	Yes	Yes
Equipment Control Register	Yes	Yes	Yes	Yes
Configuration Data/Resume File	Yes	Yes	Yes	Yes
Equipment Out-of-Balance Listing	No	No	Yes	Yes
AF Form 601 Certified File	Yes	Yes	Yes	Yes
Equipment Custodian File	Yes	Yes	Yes	Yes
Daily Transaction Report	No	No	Yes	Yes

---

The paragraphs which follow discuss the analysis of each task in detail:

While Tables of Allowances reviews were found to be the most serious problem affecting training times and error rates in the EMS, the task met only two of the four criteria set for automation. TA reviews require tremendous amounts of data which are currently contained on microfiche and on computer tape on the AFLC computer systems. This task is, therefore, inappropriate for automation on a stand-alone computer system. This problem is certainly solvable on the

Air Force standard small computer but the requisite hardware is not available. We have the technology, using compact disks, to store large amounts of data and use it in stand-alone applications (Harding, 1988a). However, AFLC does not currently provide TAs on compact disk, and the EMSs do not have compact disk readers. PC database management software has the capability to perform the job, and TA reviews are performed continuously by equipment management technicians.

Because this task is very difficult and labor-intensive, it was important, in spite of the difficulties encountered, to find a way to provide some automated capabilities to assist the EMSs until AFLC begins to provide TAs on some medium other than microfiche. Accordingly, while the TA review task itself could not be automated during this research, the management process, ensuring reviews are conducted by appropriate technicians in a timely manner, was found to be an important task which could be automated.

The Equipment Control Register met all of the criteria for automation. Since the data needed for this task are generated from the paperwork received by the EMS from equipment custodians, and are not required to be used by any other organization, a stand-alone system automating this task is appropriate. The problem can be solved on a microcomputer using an off-the-shelf DBMS, and it is a task which is performed every day.

The Configuration Data/Resume File also met all four of the criteria. Data for this task are not centrally held,

and do not change very often. Therefore, a stand-alone system is appropriate for automation of this task. Again, a PC DBMS hosted on an Air Force small computer will accomplish this task very well. This file, at many bases, is not reviewed and updated as often as it should be to make it a useful management tool (Anderson, 1988a; Stackhouse, 1988c). However, although this task is not always accomplished regularly, it was added to the list of candidates for automation because the Air Force requires that it be accomplished regularly (USAF, 1987:Ch 22, 34).

The Equipment Out-of-Balance Listing itself has already been automated within the SBSS. The review process, however, has not been automated. The data requirements for this review are extensive and automated interfaces with the SBSS and AFLC would need to be established, so it would not be appropriate to implement a revision to the Q10 on a stand-alone system. Like the TA reviews, the Air Force standard small computer without additional memory and a compact disk reader is not capable of doing this work. A PC based DBMS is capable of doing the work, however, and the review must be accomplished on a regular basis. Since this task met only two out of the four criteria, it was not considered a good candidate for automation.

The Air Force Form 601 Certified File, like the Equipment Control Register, contains data which are provided to the EMS by equipment custodians. There are no other data sources, and there is no need to build an automated

interface between the EMS and some other organization prior to automating this task. Therefore, this file could be implemented on a stand-alone system. The Air Force standard small computer, coupled with a powerful microcomputer-based DBMS are capable of handling the quantity and complexity of the data in this file. Finally, Air Force Forms 601 are processed in the EMS every day. This problem task meets all of the criteria and was considered a good candidate for automation.

The Equipment Custodian File also met all four of the criteria. All of the data in this file are created in the EMS, or provided to the EMS by the Consolidated Base Personnel Office or the supported organizations, so a stand-alone system would be capable of managing the task. A relatively unsophisticated database is required for this particular file, so most microcomputer DBMSs are capable of automating this task on a PC. The file should be used at least weekly so technicians can schedule new custodians for training and prepare to transfer accountability of accounts as custodians are replaced. The Equipment Custodian File was deemed a good candidate for automation.

The final problem area is the D16, Daily Transaction Report. This report goes from the SBSS to AFLC on computer tape. This type of processing is not appropriate for a stand-alone system, and the Air Force standard small computer does not currently have the capability to write to the SBSS tape drives (Harding, 1988c). The task is performed daily and the data structures and requirements are

straightforward and well within the capabilities of microcomputer-based DBMSs. Since the D16 is not a stand-alone, independent task, and the Air Force standard small computers do not currently have the capability to write to the SBSS tape drives, this task was not found to be a good candidate for automation.

Research Question Three. Which, if any, of those procedures found to be feasible for automation are already in the process of being automated by Air Force organizations?

The Air Force is developing a new data system to automate much of the equipment management process. This data system, like the equipment management process itself, is called AFEMS. One of the studies the System Program Office (SPO) for this data system has accomplished is a survey of equipment management automation efforts in the Air Force (Harding, 1988a). The AFEMS SPO found that some EMSs have automated their Equipment Control Registers using PCs and a DBMS. None of the systems found was integrated with any other tasks required of EMS technicians and all required users to be familiar with the database management software (Harding, 1988a). The AFEMS SPO also found that many bases use word processors to maintain their Air Force Form 601 Certified File, Equipment Custodian File, and Configuration Data/Resume File. Interestingly, none of the three problems determined to be poor candidates for automation has been automated anywhere in the Air Force, but the new AFEMS data system will fully automate all three.

Research Question Four. Which database management software package is most appropriate for the automation of selected equipment management procedures?

Before answering this question, a set of criteria for choosing a package was established. First, the package had to be available for use on a stand-alone microcomputer. Since applications would be developed on a microcomputer with no automated interfaces with other computer systems, this was essential. Second, it had to be programmable. Many DBMS packages do not provide a programming language. A programming language gives the system developer the flexibility to create a system which is easy to use and does not require the user to have any knowledge of databases and database management systems. Third, the ideal DBMS is one which is available to all Air Force users. In the best of situations, the DBMS would already have been purchased by users for the PCs in their offices. However, if this was not the case, the DBMS chosen had to be available through General Services Administration (GSA) contract. Fourth, there should be a strong base of knowledge about the DBMS in the Air Force so the programs could be maintained and updated well. Fifth, since the capabilities of computer hardware and software change rapidly, the ideal DBMS would be one which has state-of-the-art features including an implementation of Structured Query Language (SQL), a built-in compiler, and advanced report writing capabilities.

The top five databases, as measured by the five criteria discussed above, were dBASE III PLUS (tm), Enable

(tm), FoxBase Plus (tm), Paradox (tm), and R:base for DOS (tm). Table 6 shows the top five DBMS packages and how they measured up to the five criteria.

Table 6  
Comparison of DBMS Packages

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	Micro- Based?	Program- mable?	GSA Contract?	Knowledge Base?	Frontline Features?
dBASE III PLUS (tm)	Yes	Yes	Yes	Excellent	See Note 1
Enable (tm)	Yes	Yes	Yes	Some	No
FoxBase Plus (tm)	Yes	Yes	See Note 2	See Note 3	No
Paradox (tm)	Yes	Yes	See Note 2	No	Yes
R:base for DOS (tm)	Yes	Yes	See Note 2	Limited	Yes

Note 1: A new version with state-of-the-art features will be released in late 1988.

Note 2: These packages were not available on GSA contract at the time this analysis was accomplished. They all are now available on GSA contract.

Note 3: This DBMS is a clone of dBase III PLUS (tm) so there is a large group of Air Force workers who could use this package with minimal difficulty.

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All five of the DBMSs are relational database systems, and each met the first two requirements of availability in a PC version and programmability. However, only two of the five, dBASE III PLUS (tm) and Enable (tm) were available on GSA contracts at the time this analysis was accomplished.

Each of the five was available to government buyers by July of 1988.

There is a small base of knowledge in the Air Force in R:base System V (tm), which has been upgraded to R:base for DOS (tm). Most of this knowledge is concentrated in the minds of full-time programmers, because this DBMS has been used on many minicomputers around the Air Force (Harding, 1988b). Since Paradox (tm) and FoxBase Plus (tm) have only recently become available to government buyers, there is no knowledge base yet established in the Air Force for these programs. Of the five packages, dBASE III PLUS (tm) has the strongest following in the Air Force. AFLMC and the Air Force Standard Systems Center have been using dBASE III PLUS (tm) to build small stand-alone MISs since 1986 (Kendall, 1988). In addition, these organizations have the capability to compile dBASE III PLUS (tm) programs. This provides extra speed and allows users who do not have access to dBASE III PLUS (tm) to use programs written in dBASE III PLUS (tm) code. Many books are available on using and programming dBASE III PLUS (tm) applications, classes sponsored by AFLC and ATC have been given to hundreds of users (Francis, 1988), and many users now have the program installed on the PCs in their offices (Harding, 1988b). There is a small base of knowledge concerning Enable (tm) in the Air Force, but most recent database applications have been written in dBASE III PLUS (tm) (Harding, 1988b). There are many reasons for this. While Enable (tm) has the advantage of being an integrated software package with spreadsheet and

word processing capabilities in addition to its data management function, the DBMS is not as powerful and does not contain the features that dBASE III PLUS and many of the newer DBMS software packages have (Smith, 1987:17; Harding, 1988b). Thousands of copies of Enable Version 1.15 were distributed with the new Zenith Z-248 (tm) microcomputers in 1986 and 1987, so software availability is not a problem for Enable. Several books have recently been published to help Enable users get the most from their integrated software. Unfortunately, the DBMS included with Enable Version 1.15 is a dBASE II clone. This DBMS is quite powerful, but the user interface and programming capabilities are archaic in comparison to the other four software packages. Paradox (tm) and R:base for DOS (tm) are the most advanced of the five DBMSs. For example, along with several other new features, Paradox (tm) is the first DBMS to provide automatic updating of screens as data are changed (PC Magazine, 1988:122). R:base for DOS (tm) contains the first Structured Query Language (SQL) implementation in a microcomputer DBMS, and a compiler (PC Magazine, 1988: 252). The next most advanced of the five is dBASE III PLUS (tm). While it does not provide all of the features available in Paradox (tm) and R:base for DOS (tm), it is a solid performer and a new version, dBASE IV (tm), will be released in the latter half of 1988 (PC Magazine, 1988: 152). Unfortunately, the release date is not yet known because several major software problems have been discovered during

testing. When it is released, DBASE IV (tm) will provide full relational database capabilities, SQL, and several new mathematical functions (PC Magazine 1988: 156). The new version is significantly faster than previous versions and can read dBASE III PLUS (tm) files (PC Magazine, 1988: 156). FoxBase Plus (tm) is a clone of dBASE III PLUS (tm) which runs faster than the latter, but does not support some of the dBASE III PLUS (tm) functions (PC Magazine, 1988: 182). Enable (tm) is the least advanced of the five DBMSs, although there is a new version available with more features than those contained in Version 1.15.

The analysis of these five software packages clearly revealed that any software choice is a compromise. Obviously, it would be helpful to users if an integrated package was used to automate tasks because they would never have to switch from one piece of software to another. Unfortunately, Enable (tm), the only integrated package in the group, does not have a strong following, and lacks features which the other software packages have. It would also be helpful to both users and programmers if the DBMS chosen had an implementation of SQL. However, R:base for DOS (tm) was not available on GSA contract until after a final decision was made on a DBMS to use for this study. While dBASE III PLUS (tm) does not have all of the features of Paradox (tm) and R:base for DOS (tm), and it is not as fast as FoxBase Plus (tm), it is available to Air Force users, has gained a following by programmers and users throughout the Air Force, and is compatible with the

impending release of dBASE IV (tm). The compromise choice, then, was dBASE III PLUS (tm).

Research Question Five. How can those procedures which are automated during this study be fielded to ensure maximum effectiveness and efficiency in their distribution, maintenance, and improvement?

AFLMC/LGS has a small group of people whose primary responsibilities include designing, writing, distributing, improving, and maintaining microcomputer-based software for use by base supply organizations around the world (Howard, 1988). This organization initiates software projects and accepts requests for projects from major commands (MAJCOMs) and separate operating agencies (SOAs). Software is distributed to MAJCOMS and SOAs and then passed on to the base supply organizations. Lt Col Peterson, the director of AFLMC/LGS, has agreed to take the software written during this study, perform verification and validation tests on it, and distribute it for worldwide Air Force use (Peterson, 1988). AFLMC/LGS personnel will maintain the software.

#### Equipment Management Information System (EMIS)

The system designed and developed during this study, dubbed the Equipment Management Information System (EMIS) was written in dBASE III PLUS (tm) program code. It provides equipment management technicians with assistance in four of the tasks which most often require extensive training times to master, or result in high error rates. These tasks are the (1) Air Force Form 600 Log, (2) Tables

of Allowances Review List, (3) Configuration Data/Resume File, and (4) Equipment Custodian Listing. Figure 1 shows the hierarchy of the major programs in the system, while Figure 2 shows the functions of the system.

Main Menu. When the user logs on to EMIS an initial menu appears. Figure 3 is a facsimile of this menu. The user is confronted with a screen which provides the date and time, as well as a series of choices. As the user reviews the menu, the system automatically updates the time on the screen. From this menu, by pressing either <A>, <B>, <C>, <D>, <H>, or <Q>, the user can access any of the four tasks, get Help, or Quit the system. EMIS does not allow inputs other than the six letter choices given, so human input errors are kept to a minimum. Beneath each of the main menu choices except <Q>, is a series of programs which provide menus and functions specific to the particular task being accomplished. However, if the letter <Q> is chosen, the main program (EMIS.PRG) closes the databases, sets the computer environment back to the standard default values, issues a farewell statement, and returns control of the computer to the user. Figure 4 is a flowchart of the program logic for the EMIS startup routine (EMIS.PRG).

Air Force Form 600 Menu. If the user chooses the letter A from the main menu, the Air Force Form 600 Control Log menu will appear. Figure 5 is a facsimile of this menu. From this menu, the user can add, update, or delete records from the Air Force Form 600. In addition, there is a set of

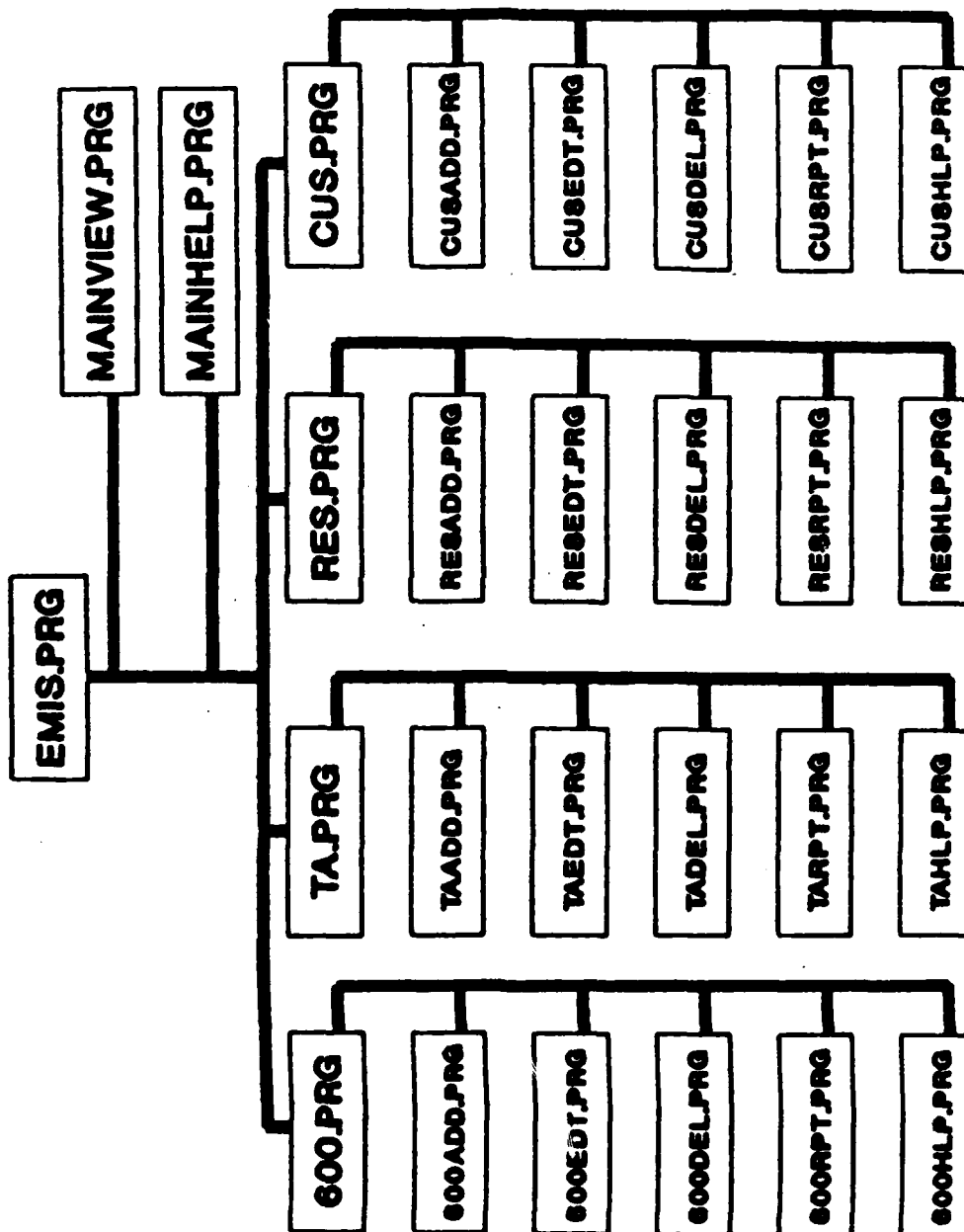


Figure 1. Hierarchy of EMIS Major Programs

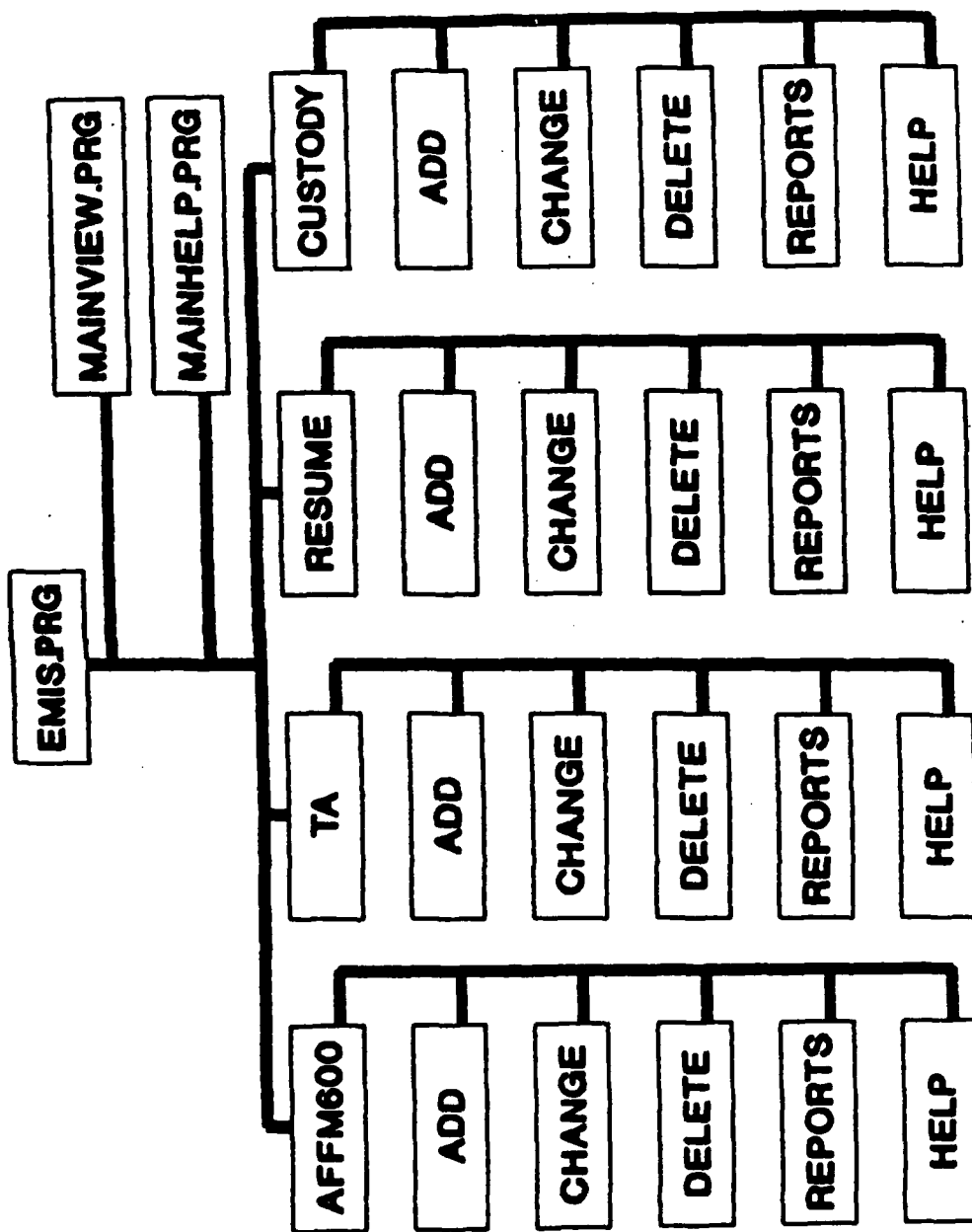


Figure 2. EMIS System Functions

# **EQUIPMENT MANAGEMENT INFORMATION SYSTEM**

**DATE**  
**07/31/88**

**TIME**  
**12:22:09**

**[A] Air Force Form 600 Control Log**

**[B] Tables of Allowances Review List**

**[C] Configuration Data/Resume List**

**[D] Equipment Custodian List**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - D, H, Q): :]**

**Figure 3. EMIS Main Menu**

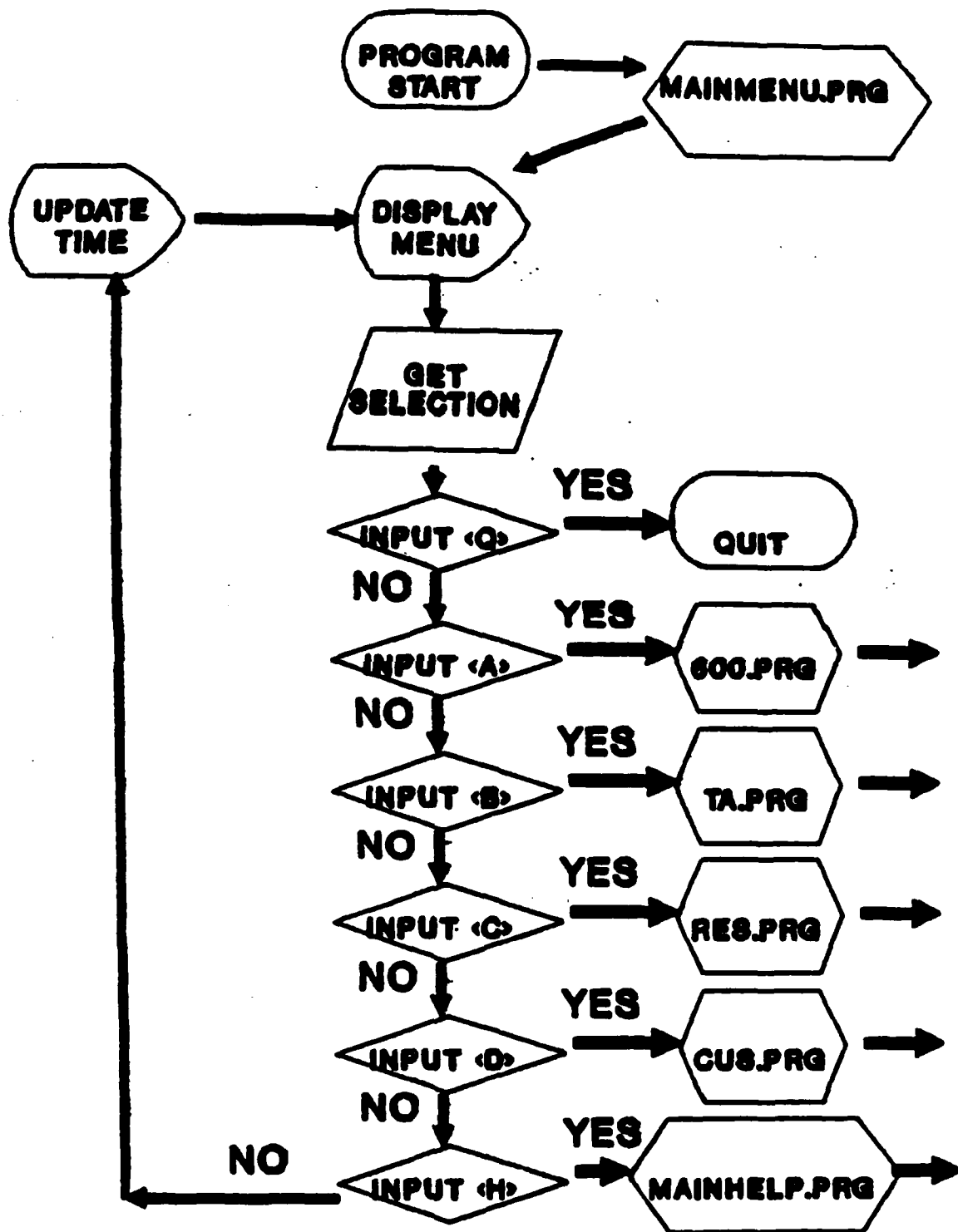


Figure 4. Flowchart of the EMIS Startup Routine (EMIS.PRQ)

## **AIR FORCE FORM 600 CONTROL LOG**

**DATE**  
**08/17/88**

**TIME**  
**21:47:11**

**[A] Add Records To The Log**

**[B] Update Records Previously Logged In**

**[C] Delete Records Previously Logged In**

**[D] Reports**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - D, H, Q): :]**

**Figure 5. Air Force Form 600 Menu**

reports programmed into the system which can be called and either printed or sent to the computer screen. The user can also call up a Help program which provides information on the Air Force Form 600. Finally, the user can quit the Air Force Form 600 module and return to the main menu. Figure 6 is a flowchart of the program logic for the Air Force Form 600 startup routine (600.PRG).

Adding a Record. If the user chooses the letter <A> from the Air Force Form 600 Menu, an input screen will appear with blank spaces beside the common names of the Air Force Form 600 data elements. Figure 7 is a facsimile of this screen. The system itself updates the EMS Control Number, but the remaining data elements are input by the user. Inputs are error checked to the maximum extent possible. For example, since the Org/Shop Code is always a five character field with the first three characters being numeric and the last two being alpha, only three numeric characters followed by two alpha characters will be accepted by the system. When the user has completed the screen inputs, EMIS will ask the user if the inputs are correct. If any of the inputs is not correct, the user inputs an <N>. The user is then asked if he/she would like to continue. At this point, if an <N> is input, the EMIS returns the user to the Air Force Form 600 menu. If a <Y> is input, the program loops to the top of the input screen and returns control of the keyboard to the user. When the user completes the input screen and presses <Y> in response to the system's question concerning the correctness of the inputs, the data input by

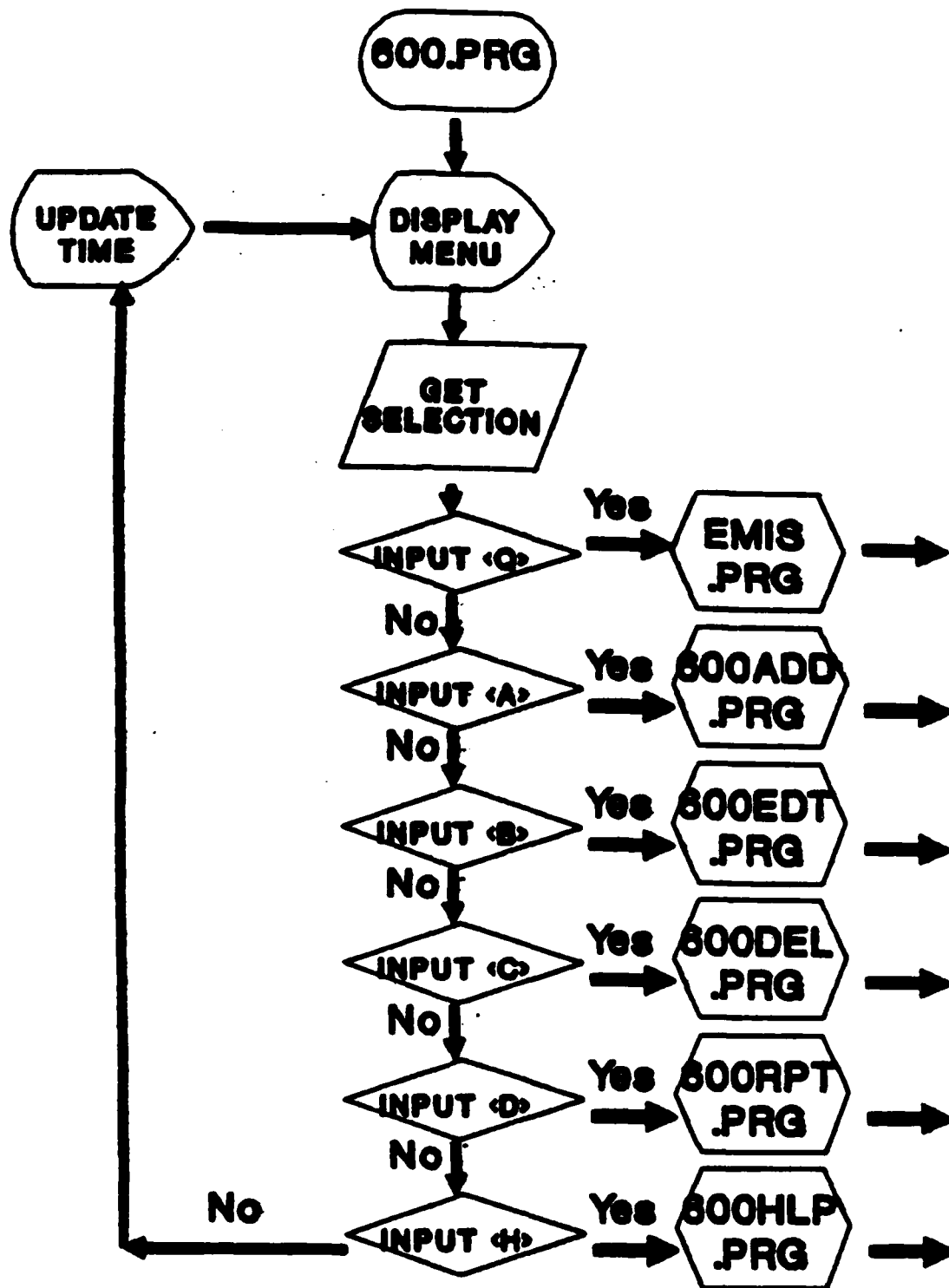


Figure 6. Flowchart of the Air Force Form 600 Startup Routine (600.PRГ)

## **AIR FORCE FORM 600 ADD ROUTINE**

**Equip Code: E   Org/Shop: 301VS   Control #: 06300**

**Custodian Request #: 82950087   In-Use Doc #: 128**

**NSN or Part #: 7105016347924   Action Requested: TIN**

**Nomenclature: Wooden Desk**

**Date Received: 8296   Date Forwarded: 8296   Fwd To: 4**

**Date Returned: 8297**

**Completion Action: Approved**

**Is This Correct? --**

**Figure 7. Air Force Form 600 Add Screen**

the user are added to the Air Force Form 600 database. At this point, EMIS asks the user if he/she has another record to input. If the answer is <N>, the system returns the user to the Air Force Form 600 menu. If the answer is <Y>, EMIS increments the EMS Control Number and loops back to a blank input screen. Figure 8 is a flowchart of the program logic for the Air Force Form 600 add routine (600ADD.PRQ).

Updating a Record. If the user chooses the letter <B> from the Air Force Form 600 Menu, an input screen will appear with blank spaces beside the names of the Air Force Form 600 data elements. Figure 9 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the EMS Control Number of the record to be updated. After the user inputs the control number, EMIS searches the Air Force Form 600 database for the record with that control number. If the system cannot locate the record in the database, the user is notified and asked if he/she would like to input another control number. If the answer is <N> to this question, EMIS returns the user to the Air Force Form 600 menu. If the answer is <Y>, the system prompts the user for a new EMS Control Number. If EMIS locates the requested record, it displays the data contained in that record on the screen. The user is then asked if the displayed record is the correct record. If the answer is <Y>, the system loops to the top of the edit screen and returns control of the keyboard to the user. If the answer is <N>, the user is then asked if he/she would like to continue. A reply of <N> results in the system returning

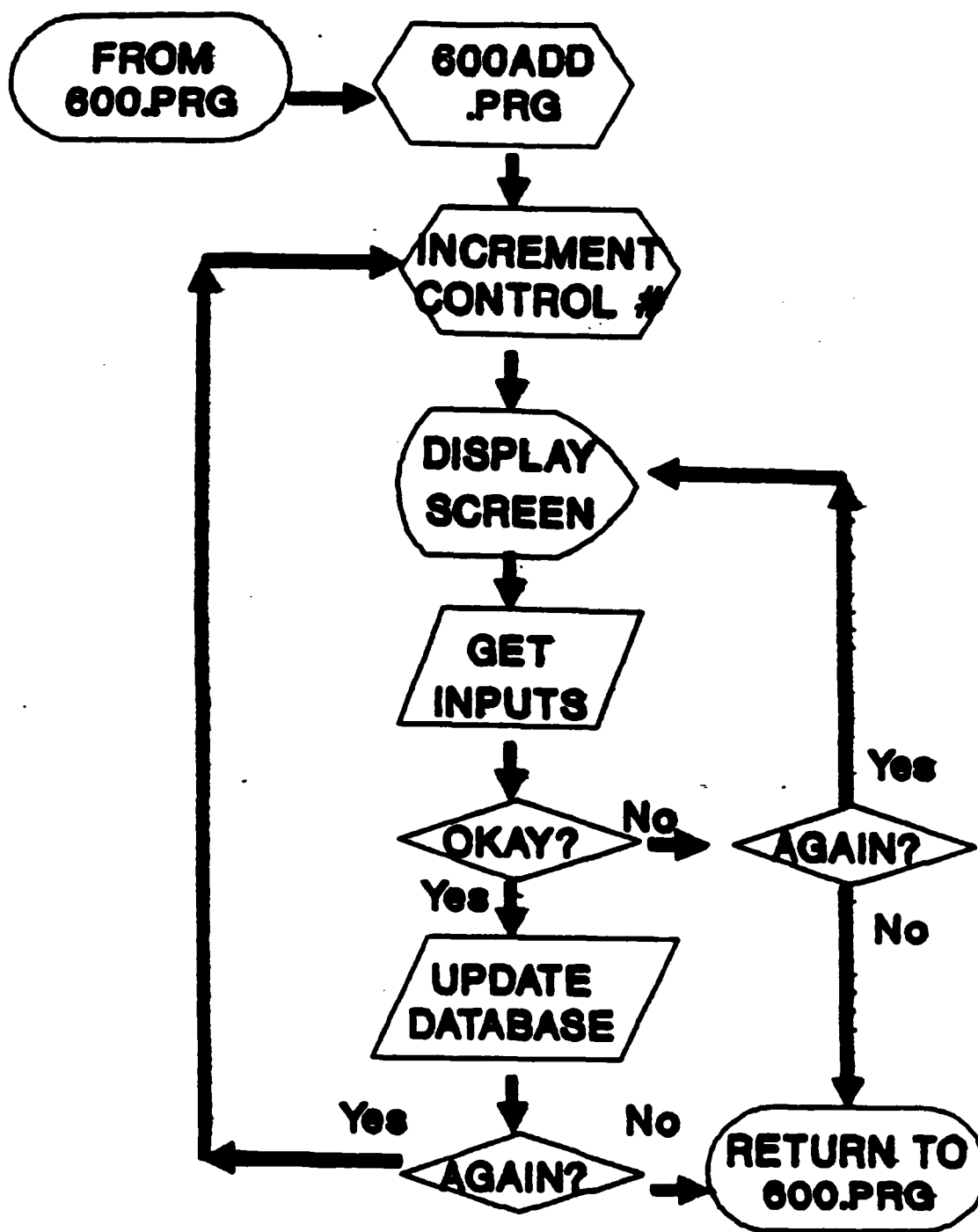


Figure 8. Flowchart of the Air Force Form 600 Add Routine (600ADD.PRG)

## **AIR FORCE FORM 600 EDIT ROUTINE**

**Equip Code: E   Org/Shop: 301VS   Control #: 05300**

**Custodian Request #: 82950087   In-Use Doc #: 128**

**NSN or Part #: 7105016347924   Action Requested: TIN**

**Nomenclature: Wooden Desk**

**Date Received: 8296   Date Forwarded: 8296   Fwd To: 4**

**Date Returned: 8297**

**Completion Action: Approved**

**Enter Control Number: 05300**

**Figure 9. Air Force Form 600 Edit Screen**

the user to the Air Force Form 600 menu. If the answer is <Y>, EMIS again prompts the user for the EMS Control Number of the record to be updated. When the user completes the edit screen and presses <Y> in response to the system's question concerning the correctness of the inputs, the appropriate record is updated in the Air Force Form 600 database. At this point, EMIS asks the user if he/she wants to update another record. If the answer is <N>, the system returns the user to the Air Force Form 600 menu. If the answer is <Y>, the system prompts the user for the EMS Control Number of a record to be updated. Figure 10 is a flowchart of the program logic for the Air Force Form 600 edit routine (600EDT.PRG).

Deleting a Record. If the user chooses the letter <C> from the Air Force Form 600 Menu, a screen will appear with blank spaces beside the names of the Air Force Form 600 data elements. Figure 11 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the EMS Control Number of the record to be deleted. After the user inputs the control number, the system searches the Air Force Form 600 database for the record with that control number. If the system cannot locate the record in the database, the user is notified and asked if he/she would like to input another control number. If the answer is <N> to this question, EMIS returns the user to the Air Force Form 600 menu. If the answer is <Y>, the system prompts the user for a new EMS Control Number. If the system locates the requested record, it displays the

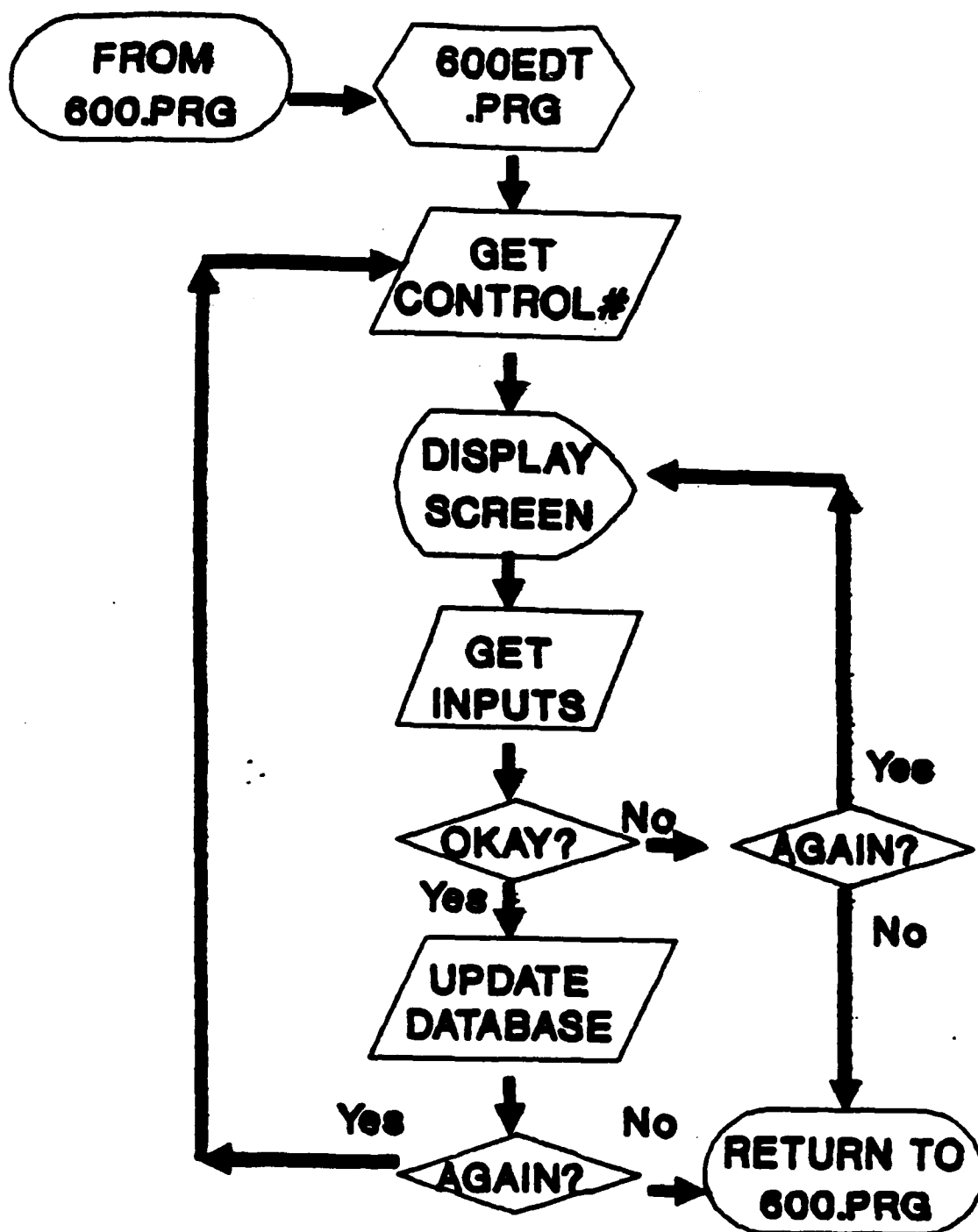


Figure 10. Flowchart of the Air Force Form 600 Edit Routine (600EDT.PRG)

## **AIR FORCE FORM 600 DELETE ROUTINE**

**Equip Code: E   Org/Shop: 301VS   Control #: 05300**

**Custodian Request #: 82950087   In-Use Doc #: 128**

**NSN or Part #: 7105016347924   Action Requested: TIN**

**Nomenclature: Wooden Desk**

**Date Received: 8296   Date Forwarded: 8296   Fwd To: 4**

**Date Returned: 8297**

**Completion Action: Approved**

**Are You Sure That You Want To Delete This Record? --**

**Figure 11. Air Force Form 600 Delete Screen**

data contained in that record on the screen. The system then asks if the displayed record is the record the user wants to delete. If the answer is <N>, the user is asked if he/she wishes to continue. If the answer is <N>, the EMIS returns the user to the Air Force Form 600 menu. If the answer is <Y>, the system prompts the user for a new EMS Control Number. When EMIS finds and displays a record and the user agrees that the record should be deleted, the user is then asked to confirm the deletion action. If the user again answers <Y>, EMIS will delete the record and notify the user that the record has been deleted. On the other hand, if the answer is <N>, the system asks the user if he/she wishes to continue. A reply of <N> results in the system returning the user to the Air Force Form 600 menu. If the answer is <Y>, the system again prompts the user for the EMS Control Number of the record to be deleted. After a record is deleted, EMIS asks the user if he/she wants to delete another record. If the answer is <N>, the system returns the user to the Air Force Form 600 menu. If the answer is <Y>, the system prompts the user for the EMS Control Number of a record to be deleted. Figure 12 is a flowchart of the program logic for the Air Force Form 600 delete routine (600DEL.PRG).

Reports Menu. If the user chooses the letter <D> from the Air Force Form 600 menu, the Air Force Form 600 Control Reports menu will appear. Figure 13 is a facsimile of this menu. From this menu, the user can send to the printer or to the screen four different types of reports.

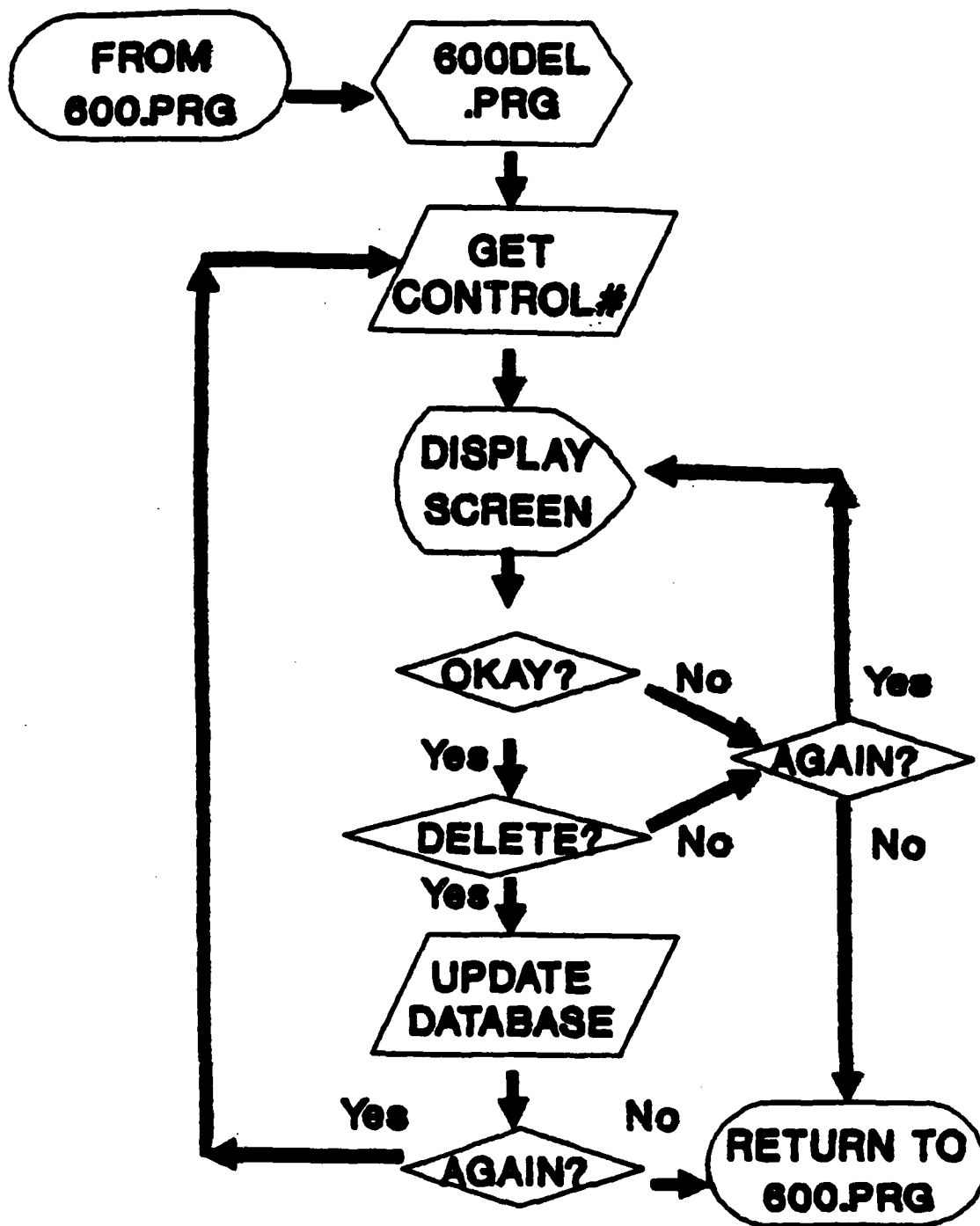


Figure 12. Flowchart of the Air Force Form 600 Delete Routine (600DEL.PRG)

# **Air Force Form 600 Reports Menu**

**DATE**  
**07/31/88**

**TIME**  
**12:22:09**

**[A] All Records**

**[B] Active Records Only**

**[C] Records By Receipt Date**

**[D] By Desk Number**

**[E] By Org/Shop Code**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - E, H, Q) : :]**

**Figure 13. Air Force Form 600 Reports Menu**

Reports can be generated which provide data on all of the records in the database, records which are active (no completion action), records received by the EMS between two dates specified by the user, and records given to a particular equipment technician.

After the user selects a particular type of report by pressing <A>, <B>, <C>, or <D> from the reports menu, a screen appears which confirms the user's choice and gives the user an opportunity to choose whether to send the report to the printer or screen, or simply to abort the report. At this point, if the user presses <P>, the report will be sent to the printer. If an <S> is pressed, the report will be sent to the screen. If a <Q> is pressed, EMIS will return the user to the Air Force Form 600 Reports menu.

The user can also call up a Help program which provides information on the Air Force Form 600 reports. Finally, the user can quit the Air Force Form 600 reports module and return to the Air Force Form 600 main menu. Figure 14 is a flowchart of the program logic for the Air Force Form 600 reports routine (600RPT.PRG).

Tables of Allowances Review List Menu. If the user chooses the letter B from the main menu, the Tables of Allowances Review List menu will appear. Figure 15 is a facsimile of this menu. From this menu, the user can add, update, or delete records from the Table of Allowances Review List. In addition, there is a set of reports programmed into the system which can be called and either printed or sent to the computer screen. The user can also

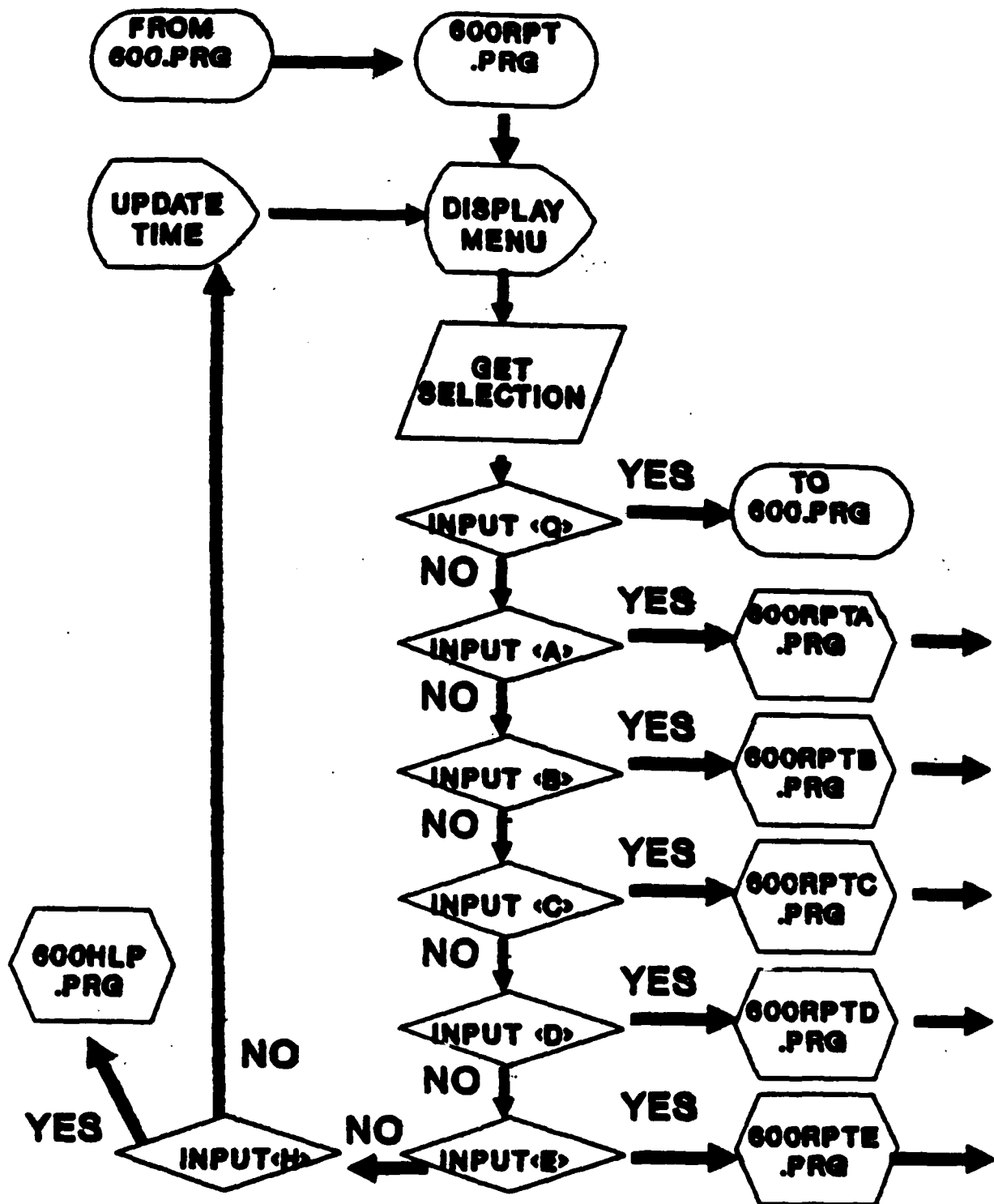


Figure 14. Flowchart of the Air Force Form 600 Reports Routine (600RPT.PRQ)

# **TABLES OF ALLOWANCES LIST**

**DATE**  
**08/21/88**

**TIME**  
**09:14:31**

**[A] Add Tables of Allowances**

**[B] Update Tables of Allowances**

**[C] Delete Tables of Allowances**

**[D] Reports**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - D, H, Q): :]**

**Figure 15. Tables of Allowances Review List Menu**

call up a Help program which provides information on the Tables of Allowances Review List. Finally, the user can quit the Tables of Allowances Review List module and return to the main menu. Figure 16 is a flowchart of the program logic for the Tables of Allowances Review List startup routine (TA.PRG).

Adding a Record. If the user chooses the letter <A> from the Tables of Allowance Review List Menu, an input screen will appear with blank spaces beside the common names of the Tables of Allowances Review List data elements. Figure 17 is a facsimile of this screen. Inputs are error checked to the maximum extent possible. For example, since the Table of Allowances Number is always a three-digit numeric, only three numeric characters will be accepted by the system. When the user has completed the screen inputs, EMIS will ask the user if the inputs are correct. If any of the inputs is not correct, the user inputs an <N>. The user is then asked if he/she would like to continue. At this point, if an <N> is input, the EMIS returns the user to the Tables of Allowances Review List menu. If a <Y> is input, the program loops to the top of the input screen and returns control of the keyboard to the user. When the user completes the input screen and presses <Y> in response to the system's question concerning the correctness of the inputs, the data input by the user are added to the Tables of Allowances Review List database. At this point, EMIS asks the user if he/she has another record to input. If the answer is <N>, the system returns the user to the Tables of

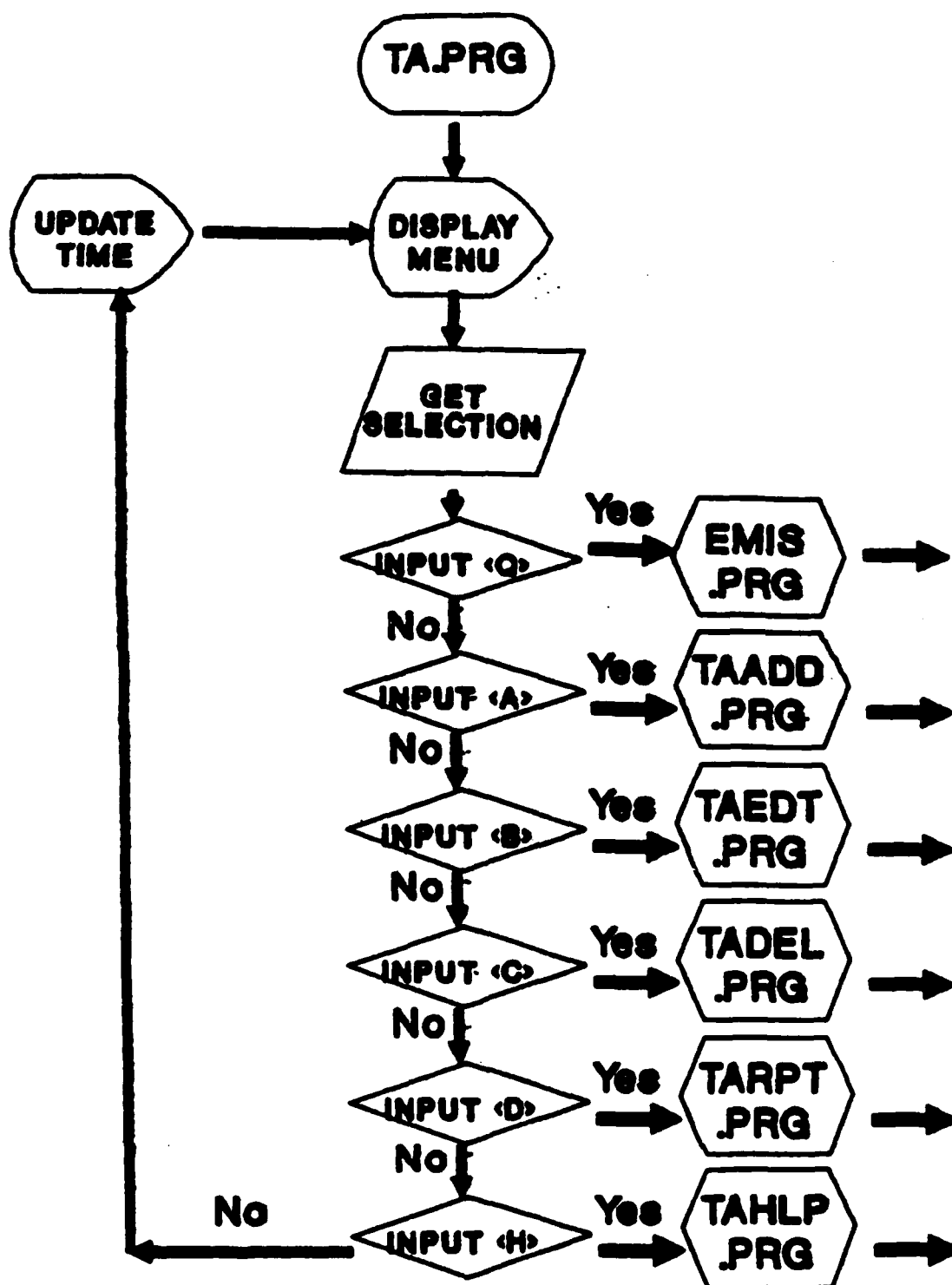


Figure 16. Flowchart of the Tables of Allowances Review List Startup Routine (TA.PRGR)

## **TABLES OF ALLOWANCES ADD ROUTINE**

**Table of Allowances: 029    Publication Date: 8103**

**Date Received: 8174    Date Forwarded: 8174**

**Forwarded To: 7    Suspense Date: 8204**

**Date Returned: 0000**

**Would You Like To Continue (Y/N) --**

**Figure 17. Tables of Allowances Review List Add Screen**

Allowances Review List menu. If the answer is <Y>, EMIS loops back to a blank input screen. Figure 18 is a flowchart of the program logic for the Tables of Allowances Review List add routine (TAADD.PRG).

Updating a Record. If the user chooses the letter <B> from the Tables of Allowances Review List Menu, an input screen will appear with blank spaces beside the names of the Tables of Allowances Review List data elements. Figure 19 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the Table of Allowances Number and Publication Date of the record to be updated. After the user inputs the control number, EMIS searches the Tables of Allowances database for the record with that Table of Allowances number and publication date. If the system cannot locate the record in the database, the user is notified and asked if he/she would like to input another TA number and publication date. If the answer is <N> to this question, EMIS returns the user to the Tables of Allowances Review List menu. If the answer is <Y>, the system prompts the user for a new TA number and publication date. If EMIS locates the requested record, it displays the data contained in that record on the screen. The user is then asked if the displayed record is the correct record. If the answer is <Y>, the system loops to the top of the edit screen and returns control of the keyboard to the user. If the answer is <N>, the user is then asked if he/she would like to continue. A reply of <N> results in the system returning the user to the Tables of Allowances Review List

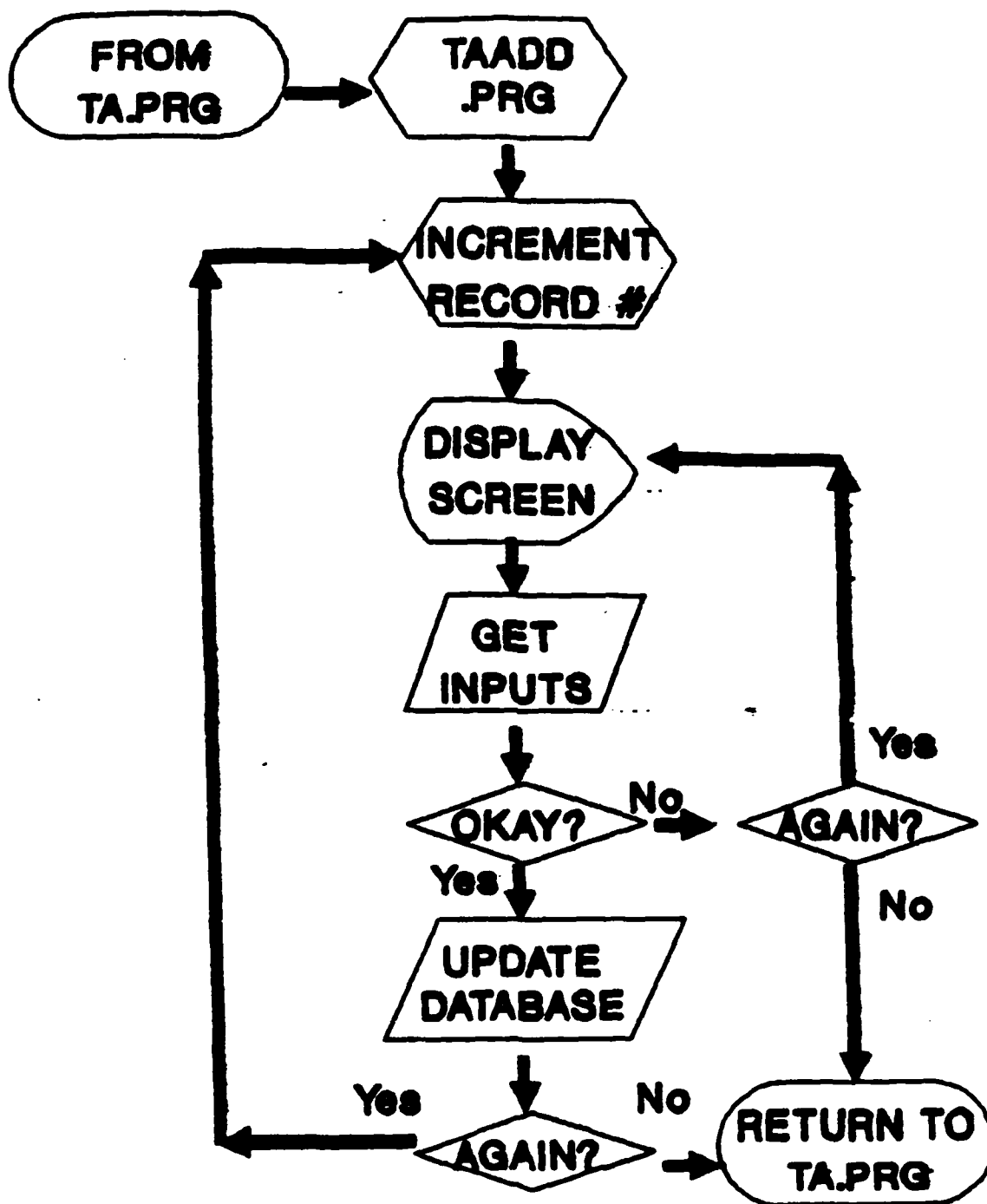


Figure 18. Flowchart of the Tables of Allowances Review List Add Routine (TAADD.PRGR)

## **TABLES OF ALLOWANCES EDIT ROUTINE**

**Table of Allowances: 029    Publication Date: 8103**

**Date Received: 8174    Date Forwarded: 8174**

**Forwarded To: 7    Suspense Date: 8204**

**Date Returned: 0000**

**Enter Table of Allowances Number: 029**

*Figure 10. Tables of Allowances Review List Edit Screen*

menu. If the answer is <Y>, EMIS again prompts the user for the TA number and publication date of the record to be updated. When the user completes the edit screen and presses <Y> in response to the system's question concerning the correctness of the inputs, the appropriate record is updated in the Tables of Allowances Review List database. At this point, EMIS asks the user if he/she wants to update another record. If the answer is <N>, the system returns the user to the Tables of Allowances Review List menu. If the answer is <Y>, the system prompts the user for the TA number and publication date of a record to be updated. Figure 20 is a flowchart of the program logic for the Tables of Allowances edit routine (TAEDT.PRG).

Deleting a Record. If the user chooses the letter <C> from the Tables of Allowances Review List Menu, a screen will appear with blank spaces beside the names of the Tables of Allowances Review List data elements. Figure 21 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the Table of Allowances number and publication date of the record to be deleted. After the user inputs the TA number and publication date, the system searches the Tables of Allowances Review List database for the record with that TA number and publication date. If the system cannot locate the record in the database, the user is notified and asked if he/she would like to input another control number. If the answer is <N> to this question, EMIS returns the user to the Tables of Allowances Review List menu. If the answer is <Y>, the

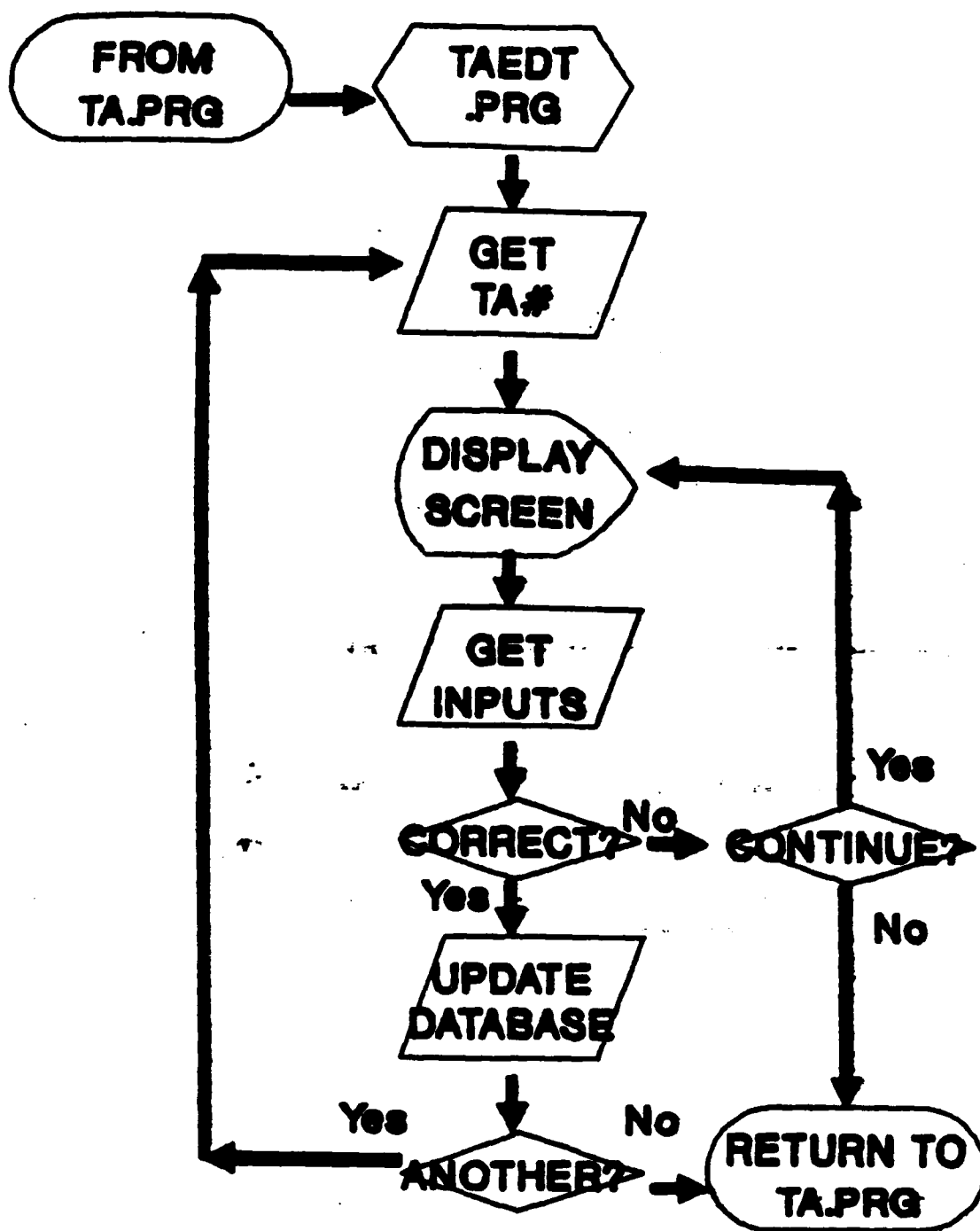


Figure 20. Flowchart of the Tables of Allowances Review List Edit Routine (TAEDT.PRG)

## **Tables of Allowances Delete Routine**

**Table of Allowances: 029    Publication Date: 8103**

**Date Received: 8174    Date Forwarded: 8174**

**Forwarded To: 7    Suspense Date: 8204**

**Date Returned: 8197**

**Are You Sure You Want To Delete This Record? (Y/N) --**

**Figure 21. Tables of Allowances Review List Delete  
Screen**

system prompts the user for a new TA number and publication date. If the system locates the requested record, it displays the data contained in that record on the screen. The system then asks if the displayed record is the record the user wants to delete. If the answer is <N>, the user is asked if he/she wishes to continue. If the answer is <N>, the EMIS returns the user to the Tables of Allowances Review List menu. If the answer is <Y>, the system prompts the user for a new Table of Allowances number and publication date. When EMIS finds and displays a record and the user agrees that the record should be deleted, the user is then asked to confirm the deletion action. If the user again answers <Y>, EMIS will delete the record and notify the user that the record has been deleted. On the other hand, if the answer is <N>, the system asks the user if he/she wishes to continue. A reply of <N> results in the system returning the user to the Tables of Allowances Review List menu. If the answer is <Y>, the system again prompts the user for the Table of Allowances number and publication date of the record to be deleted. After a record is deleted, EMIS asks the user if he/she wants to delete another record. If the answer is <N>, the system returns the user to the Tables of Allowances Review List menu. If the answer is <Y>, the system prompts the user for the Table of Allowances number and publication date of a record to be deleted. Figure 22 is a flowchart of the program logic for the Tables of Allowances Review List delete routine (TADEL.PRG).

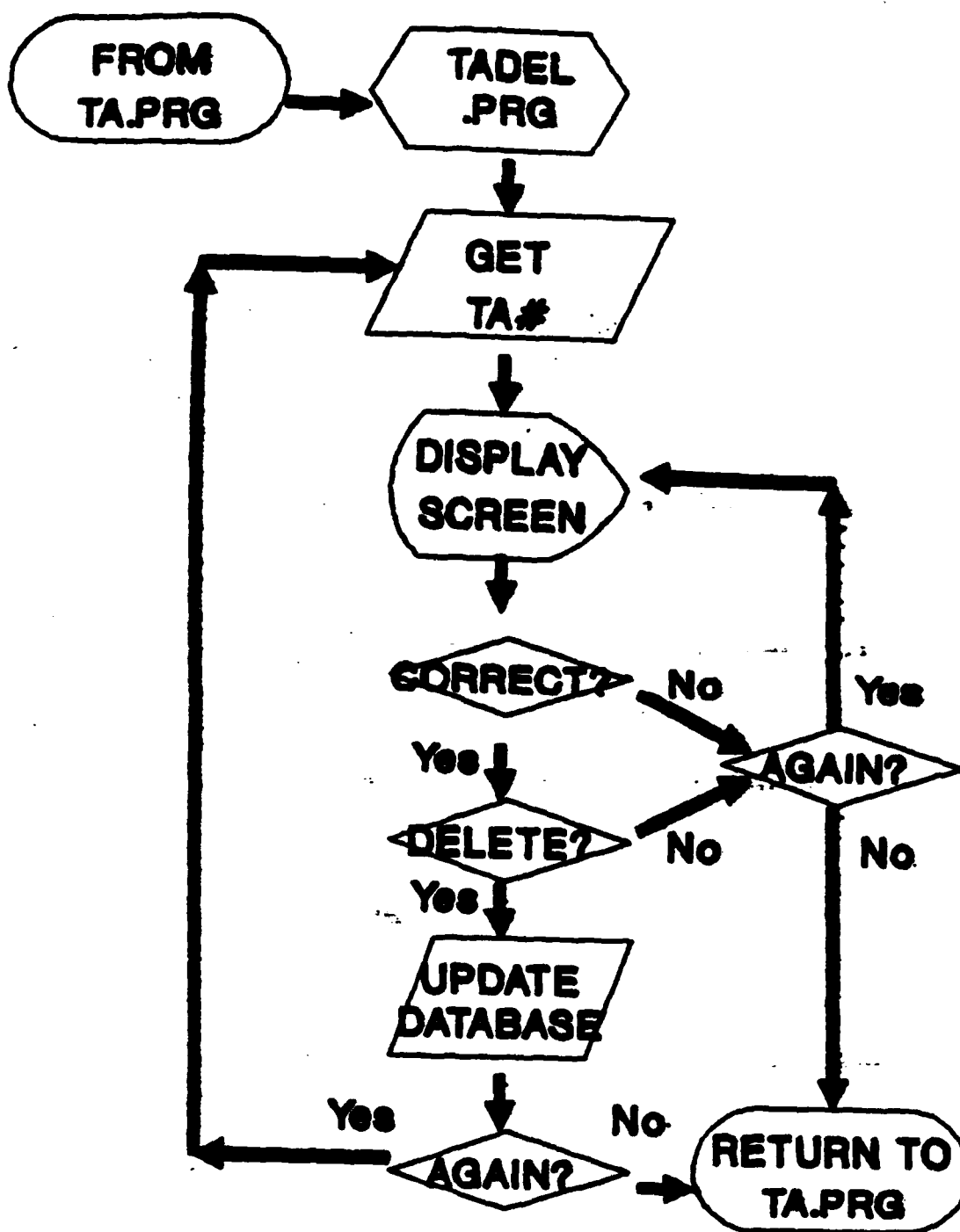


Figure 22. Flowchart of the Tables of Allowances Review List Delete Routine (TADEL.PRQ)

Reports Menu. If the user chooses the letter <D> from the Tables of Allowances Review List menu, the Tables of Allowances Review List Reports menu will appear. Figure 23 is a facsimile of this menu. From this menu, the user can send to the printer or to the screen four different types of reports. Reports can be generated which provide data on all of the Tables of Allowances in the database, Tables of Allowances which are under review (a blank return date), Tables of Allowances under review for longer than 20 days, and Tables of Allowances by Table of Allowances number.

After the user selects a particular type of report by pressing <A>, <B>, <C>, or <D> from the reports menu, a screen appears which confirms the user's choice and gives the user an opportunity to choose whether to send the report to the printer or screen, or simply to abort the report. At this point, if the user presses <P>, the report will be sent to the printer. If an <S> is pressed, the report will be sent to the screen. If a <Q> is pressed, EMIS will return the user to the Tables of Allowances Review List Reports menu.

The user can also call up a Help program which provides information on the Tables of Allowances Review List reports. Finally, the user can quit the Tables of Allowances Review List reports module and return to the Tables of Allowances Review List menu. Figure 24 is a flowchart of the program logic for the Tables of Allowances reports routine (TARPT.PRG).

# **TABLES OF ALLOWANCES REPORTS**

**DATE**  
**07/31/88**

**TIME**  
**12:22:09**

**[A] All Tables of Allowances**

**[B] Tables of Allowances Under Review**

**[C] Under Review Longer than 20 Days**

**[D] Tables of Allowances By TA #**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - D, H, Q): :]**

**Figure 23. Tables of Allowances Review List Reports  
Menu**

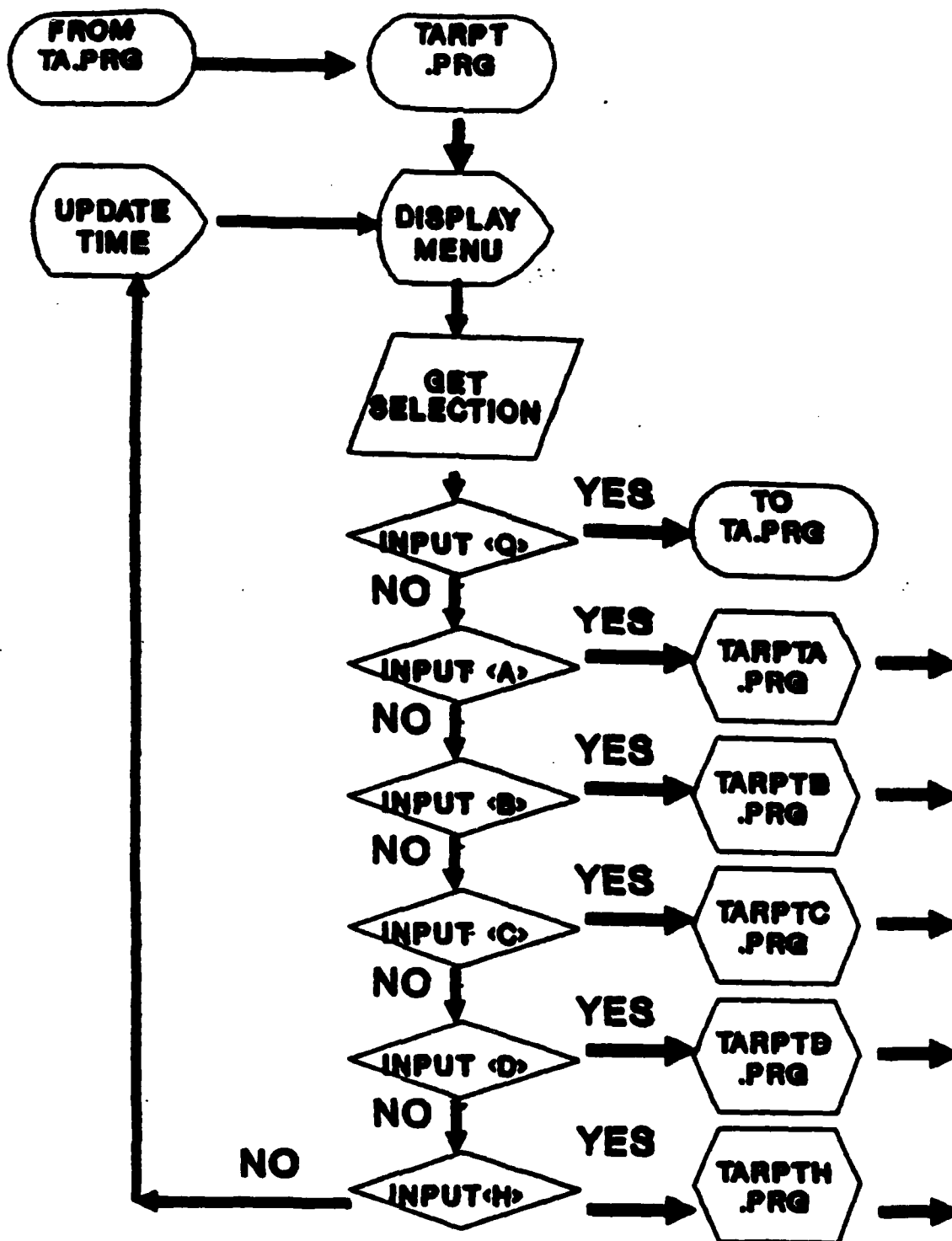


Figure 24. Flowchart of the Tables of Allowances Review List Reports Routine (TARPT.PRG)

Configuration Data/Resume File Menu. If the user chooses the letter C from the main menu, the Configuration Data/Resume File menu will appear. Figure 25 is a facsimile of this menu. From this menu, the user can add, update, or delete records from the Configuration Data/Resume File. In addition, there is a set of reports programmed into the system which can be called and either printed or sent to the computer screen. The user can also call up a Help program which provides information on the Configuration Data/Resume File. Finally, the user can quit the Configuration Data/Resume File module and return to the main menu. Figure 26 is a flowchart of the program logic for the Configuration Data/Resume File startup routine (RES.PRG).

Adding a Record. If the user chooses the letter <A> from the Configuration Data/Resume File Menu, an input screen will appear with blank spaces beside the common names of the Configuration Data/Resume File data elements. Figure 27 is a facsimile of this screen. When the user has completed the screen inputs, EMIS will ask the user if the inputs are correct. If any of the inputs is not correct, the user inputs an <N>. The user is then asked if he/she would like to continue. At this point, if an <N> is input, the EMIS returns the user to the Configuration Data/Resume File menu. If a <Y> is input, the program loops to the top of the input screen and returns control of the keyboard to the user. When the user completes the input screen and presses <Y> in response to the system's question concerning the correctness of the inputs, the data input by the user

# **CONFIGURATION DATA FILE**

**DATE**  
**08/21/88**

**TIME**  
**09:10:48**

**[A] Add An Organization Record**

**[B] Update An Organization Record**

**[C] Delete An Organization Record**

**[D] Reports**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - D, H, Q): :]**

**Figure 25. Configuration Data/Resume File Menu**

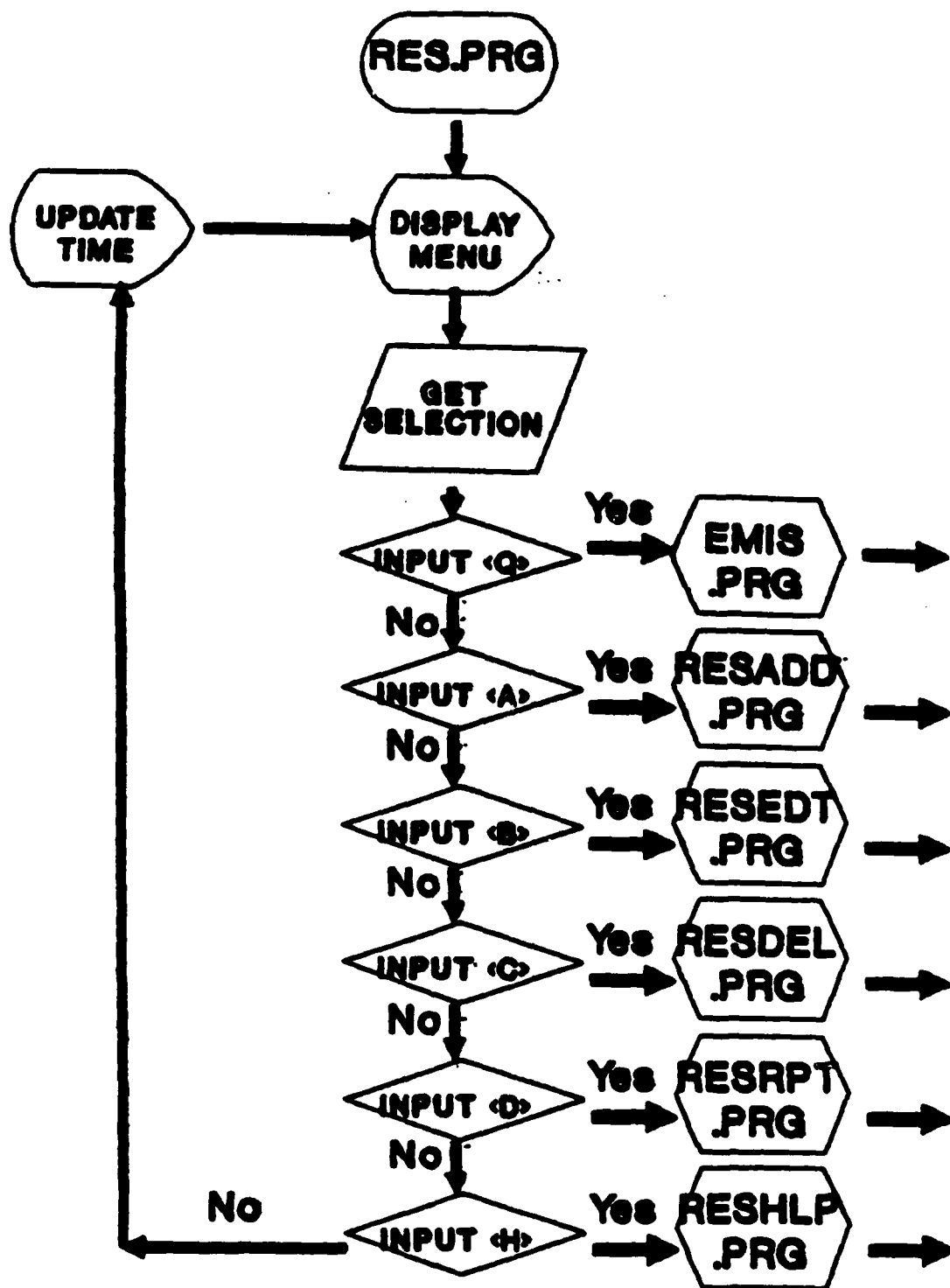


Figure 26. Flowchart of the Configuration Data/Resume File Startup Routine (RES.PRg)

## CONFIGURATION DATA ADD ROUTINE

Office Symbol: 2760ABW/MA  
Senior Grade: O6 Officers: 11 Enlisted: 612  
Authorized TA's: 457 462 538  
Buildings: 14 15 18 32 251  
Square Feet: 17348

### Mobility Taskings

Org/Shop	A-Bag	B-Bag	U-Bag	C-Bag
111AC	41	0	41	41
111AT	31	31	31	31
111ER	19	19	19	19
111FL	79	79	79	79
111HQ	73	42	73	73
111TT	26	26	26	26
111TL	52	53	62	62

Is This Correct? (Y/N) --

Figure 27. Configuration Data/Resume File Add Screen

are added to the Configuration Data/Resume File database. At this point, EMIS asks the user if he/she has another record to input. If the answer is <N>, the system returns the user to the Configuration Data/Resume File menu. If the answer is <Y>, EMIS loops back to a blank input screen. Figure 28 is a flowchart of the program logic for the Configuration Data/Resume File add routine (RESADD.PRG).

Updating a Record. If the user chooses the letter <B> from the Configuration Data/Resume File Menu, an input screen will appear with blank spaces beside the names of the Configuration Data/Resume File data elements. Figure 29 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the office symbol of the record to be updated. After the user inputs the office symbol, EMIS searches the Configuration Data/Resume File database for the record with that office symbol. If the system cannot locate the record in the database, the user is notified and asked if he/she would like to input another office symbol. If the answer is <N> to this question, EMIS returns the user to the Configuration Data/Resume File menu. If the answer is <Y>, the system prompts the user for a new office symbol. If EMIS locates the requested record, it displays the data contained in that record on the screen. The user is then asked if the displayed record is the correct record. If the answer is <Y>, the system loops to the top of the edit screen and returns control of the keyboard to the user. If the answer is <N>, the user is then asked if he/she would like to

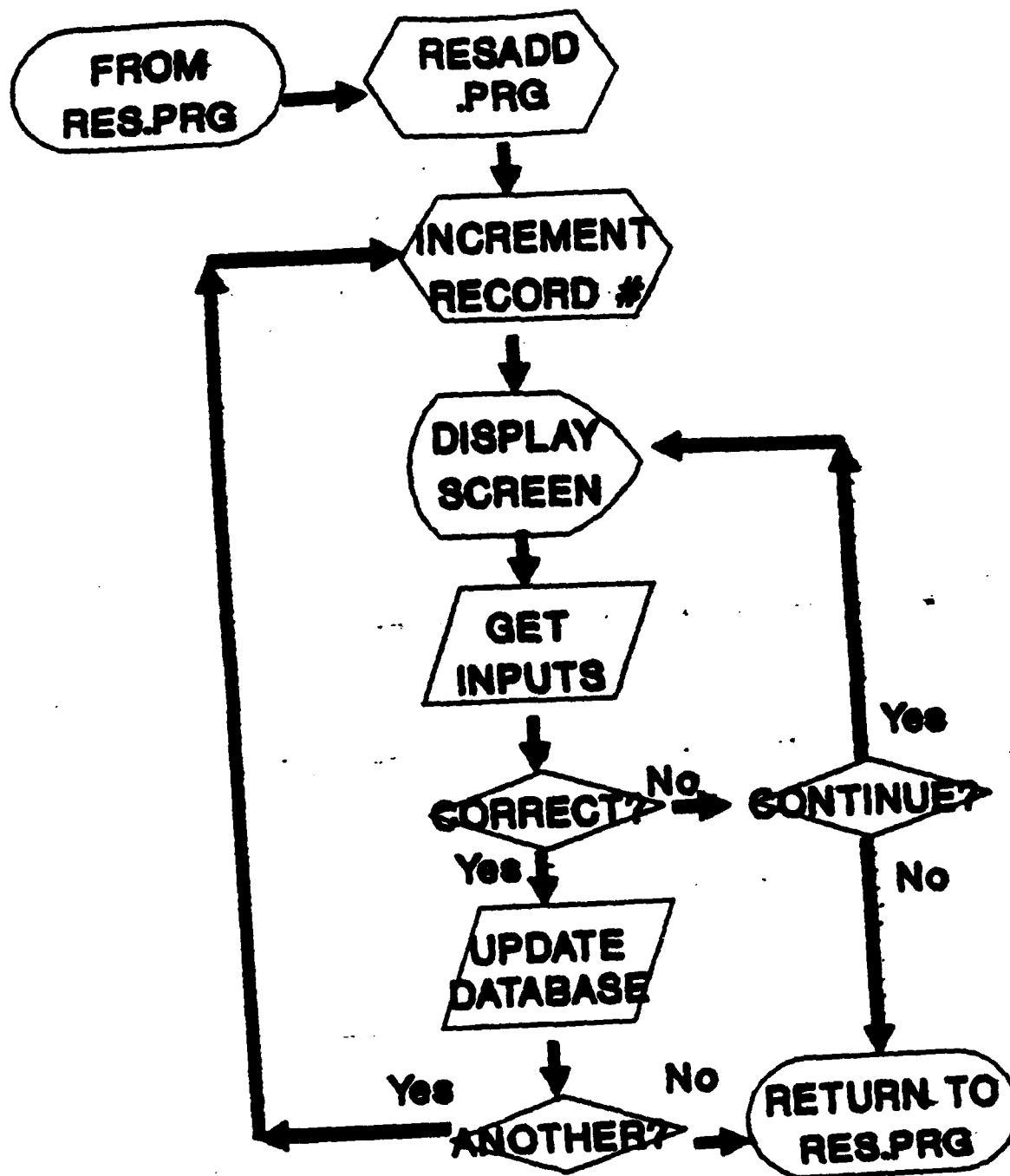


Figure 28. Flowchart of the Configuration Data/Resume File Add Routine (RESADD.PRG)

## CONFIGURATION DATA EDIT ROUTINE

Office Symbol: 2750ABW/MA  
Senior Grade: O6 Officers: 11 Enlisted: 612  
Authorized TA's: 457 462 538  
Buildings: 14 15 18 32 251  
Square Feet: 17348

### Mobility Taskings

Org/Shop	A-Bag	B-Bag	U-Bag	C-Bag
111AC	41	0	41	41
111AT	31	31	31	31
111ER	19	19	19	19
111FL	79	79	79	79
111HQ	73	42	73	73
111TT	26	26	26	26
111TL	52	53	62	62

Enter Office Symbol (e.g. 3800ABW/SV): 2750ABW/MA

Figure 29. Configuration Data/Resume File Edit Screen

continue. A reply of <N> results in the system returning the user to the Configuration Data/Resume File menu. If the answer is <Y>, EMIS again prompts the user for the office symbol of the record to be updated. When the user completes the edit screen and presses <Y> in response to the system's question concerning the correctness of the inputs, the appropriate record is updated in the Configuration Data/Resume File database. At this point, EMIS asks the user if he/she wants to update another record. If the answer is <N>, the system returns the user to the Configuration Data/Resume File menu. If the answer is <Y>, the system prompts the user for the office symbol of a record to be updated. Figure 30 is a flowchart of the program logic for the Configuration Data/Resume File edit routine (RESEDT.PRG).

Deleting a Record. If the user chooses the letter <C> from the Configuration Data/Resume File Menu, a screen will appear with blank spaces beside the names of the Configuration Data/Resume File data elements. Figure 31 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the office symbol of the record to be deleted. After the user inputs the office symbol, the system searches the Configuration Data/Resume File database for the record with that office symbol. If the system cannot locate the record in the database, the user is notified and asked if he/she would like to input another office symbol. If the answer is <N> to this question, EMIS returns the user to the Configuration

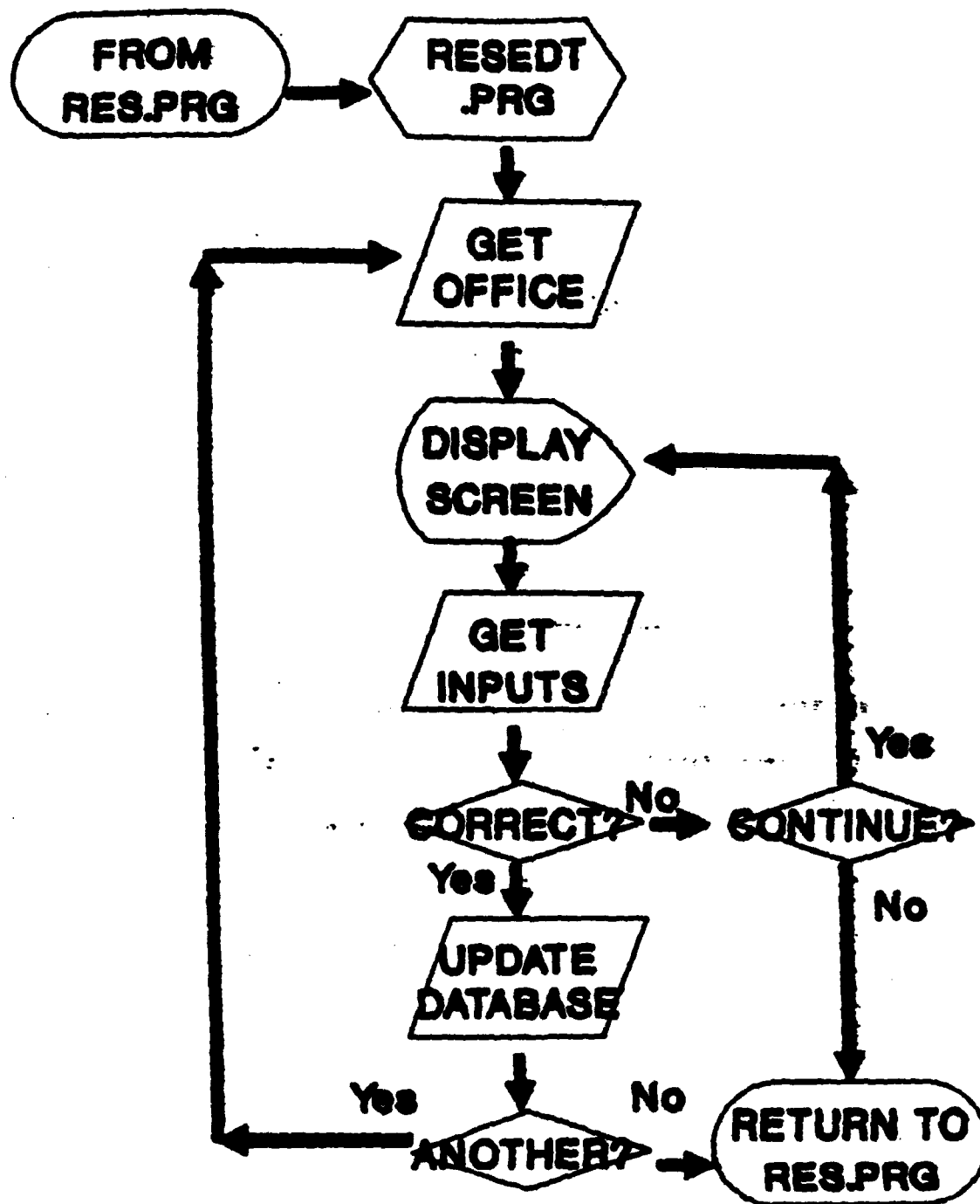


Figure 30. Flowchart of the Configuration Data/Resume File Edit Routine (RESEDT.PRG)

## CONFIGURATION DATA DELETE ROUTINE

Office Symbol: 2750ABW/MA  
Senior Grade: O6 Officers: 11 Enlisted: 612  
Authorized TA's: 457 462 538  
Buildings: 14 15 18 32 251  
Square Feet: 17348

### Mobility Taskings

Org/Shop	A-Bag	B-Bag	U-Bag	C-Bag
111AC	41	0	41	41
111AT	31	31	31	31
111ER	19	19	19	19
111FL	79	79	79	79
111HQ	73	42	73	73
111TT	26	26	26	26
111TL	52	53	62	62

Are You Sure You Want To Delete This Record? (Y/N) --

Figure 31. Configuration Data/Resume File Delete Screen

Data/Resume File menu. If the answer is <Y>, the system prompts the user for a new office symbol. If the system locates the requested record, it displays the data contained in that record on the screen. The system then asks if the displayed record is the record the user wants to delete. If the answer is <N>, the user is asked if he/she wishes to continue. If the answer is <N>, the EMIS returns the user to the Configuration Data/Resume File menu. If the answer is <Y>, the system prompts the user for a new office symbol. When EMIS finds and displays a record and the user agrees that the record should be deleted, the user is then asked to confirm the deletion action. If the user again answers <Y>, EMIS will delete the record and notify the user that the record has been deleted. On the other hand, if the answer is <N>, the system asks the user if he/she wishes to continue. A reply of <N> results in the system returning the user to the Configuration Data/Resume File menu. If the answer is <Y>, the system again prompts the user for the office symbol of the record to be deleted. After a record is deleted, EMIS asks the user if he/she wants to delete another record. If the answer is <N>, the system returns the user to the Configuration Data/Resume File menu. If the answer is <Y>, the system prompts the user for the office symbol of a record to be deleted. Figure 32 is a flowchart of the program logic for the Configuration Data/Resume File delete routine (RESDEL.PRG).

Reports Menu. If the user chooses the letter <D> from the Configuration Data/Resume File menu, the

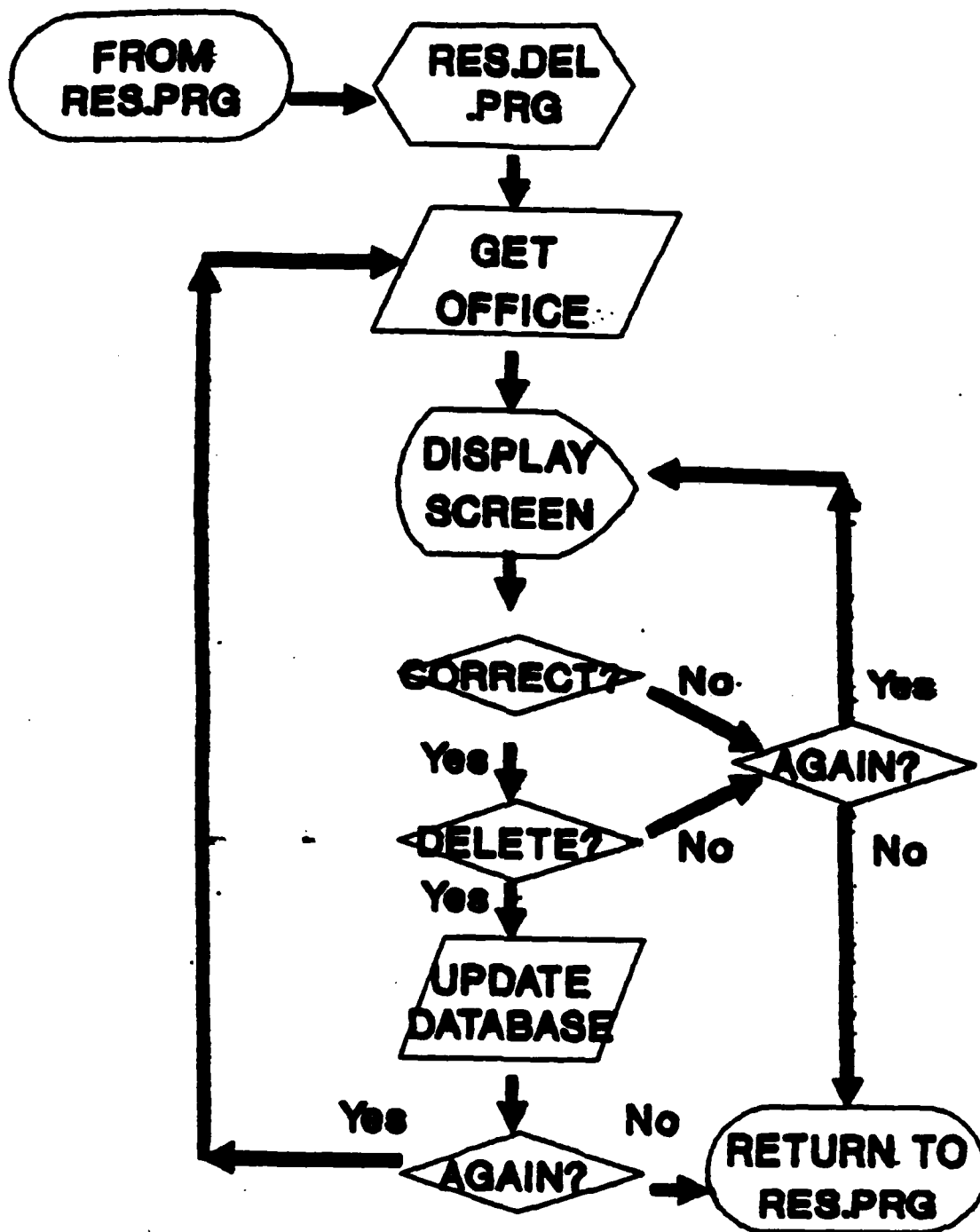


Figure 32. Flowchart of the Configuration Data/Resume File Delete Routine (RESDEL.PRG)

Configuration Data/Resume File Control Reports menu will appear. Figure 33 is a facsimile of this menu. From this menu, the user can send to the printer or to the screen three different types of reports. Reports can be generated which provide data on all of the organizations in the database, by office symbol, and shops authorized to use a Table of Allowances specified by the user.

After the user selects a particular type of report by pressing <A>, <B>, or <C>, from the reports menu, a screen appears which confirms the user's choice and gives the user an opportunity to choose whether to send the report to the printer or screen, or simply to abort the report. At this point, if the user presses <P>, the report will be sent to the printer. If an <S> is pressed, the report will be sent to the screen. If a <Q> is pressed, EMIS will return the user to the Configuration Data/Resume File Reports menu.

The user can also call up a Help program which provides information on the Configuration Data/Resume File reports. Finally, the user can quit the Configuration Data/Resume File reports module and return to the Configuration Data/Resume File main menu. Figure 34 is a flowchart of the program logic for the Configuration Data/Resume File reports routine (RESRPT.PRG).

Equipment Custodian List Menu. If the user chooses the letter D from the main menu, the Equipment Custodian List menu will appear. Figure 35 is a facsimile of this menu. From this menu, the user can add, update, or delete records from the Equipment Custodian List. In

# **CONFIGURATION DATA REPORTS**

**DATE**  
**07/31/88**

**TIME**  
**12:22:09**

**[A] All Organizations**

**[B] Organization By Office Symbol**

**[C] Organization By Table of Allowance**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - C, H, Q): :]**

**Figure 33. Configuration Data/Resume File Reports Menu**

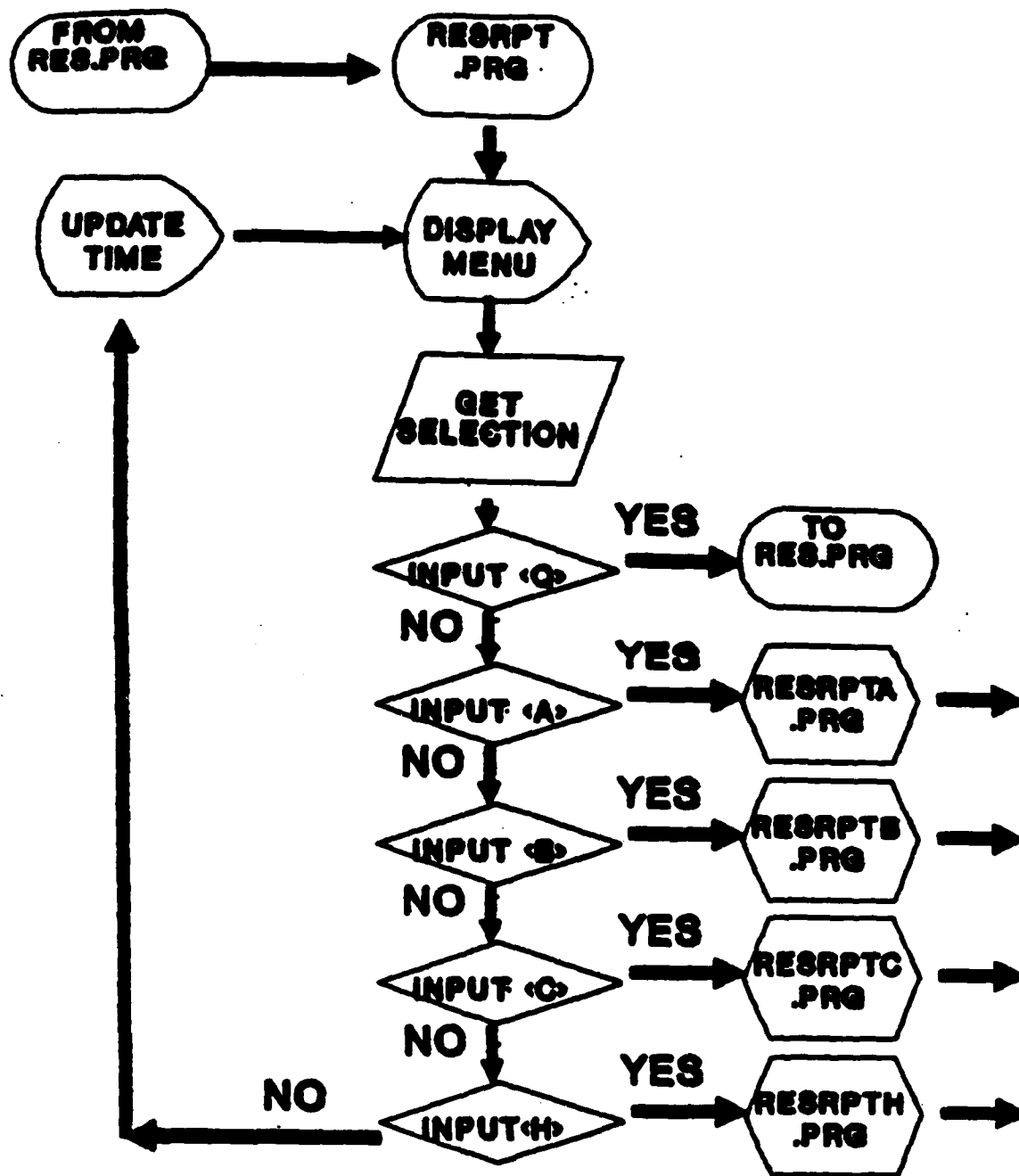


Figure 34. Flowchart of the Configuration Data/Resume File Reports Routine (RESRPT.PRG)

# **EQUIPMENT CUSTODIAN LIST**

**DATE**  
**08/21/88**

**TIME**  
**09:02:08**

**[A] Add A Custodian**

**[B] Update A Custodian**

**[C] Delete A Custodian**

**[D] Reports**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - D, H, Q): :]**

**Figure 35. Equipment Custodian List Menu**

set of reports programmed into the system which can be called and either printed or sent to the computer screen. The user can also call up a Help program which provides information on the Equipment Custodian List. Finally, the user can quit the Equipment Custodian List module and return to the main menu. Figure 36 is a flowchart of the program logic for the Equipment Custodian List startup routine (CUS.PRQ).

Adding a Record. If the user chooses the letter <A> from the Equipment Custodian List Menu, an input screen will appear with blank spaces beside the common names of the Equipment Custodian List data elements. Figure 37 is a facsimile of this screen. The system itself updates the Equipment Custodian Number, but the remaining data elements are input by the user. Inputs are error checked to the maximum extent possible. For example, since the Grade of the custodian is always a two character field with the first character being alpha and the second character being numeric, only one alpha character followed by one numeric character will be accepted by the system. When the user has completed the screen inputs, EMIS will ask the user if the inputs are correct. If any of the inputs is not correct, the user inputs an <N>. The user is then asked if he/she would like to continue. At this point, if an <N> is input, the EMIS returns the user to the Equipment Custodian List menu. If a <Y> is input, the program loops to the top of the input screen and returns control of the keyboard to the user. When the user completes the input screen and presses

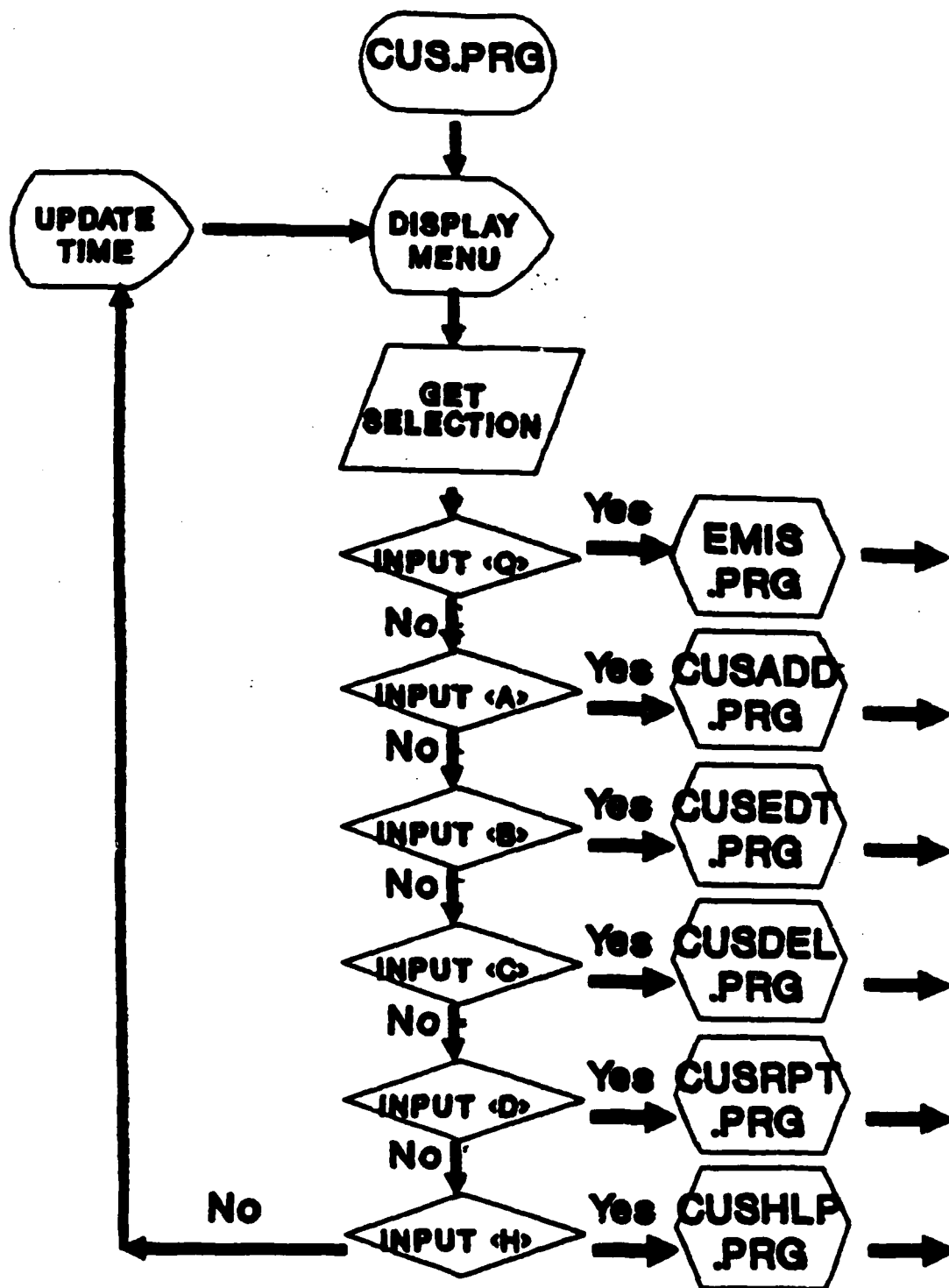


Figure 36. Flowchart of the Equipment Custodian List Startup Routine (CUS.PRGR)

## EQUIPMENT CUSTODIAN ADD ROUTINE

**Grade: E7    Custodian Number: 0243**

**Name (First, Middle, Last): Dustin D. Poole**

**Telephone: 53089    53090**

**Date Trained: 7104    Projected Departure Date: None**

<b>Org/Shop Code: 111AT</b>	<b>Primary/Alternate: P</b>
<b>Org/Shop Code: 111ER</b>	<b>Primary/Alternate: P</b>
<b>Org/Shop Code: 111HQ</b>	<b>Primary/Alternate: A</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: _</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: _</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: _</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: _</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: _</b>

**Add Another Equipment Custodian? (Y/N) \_**

Figure 37. Equipment Custodian List Add Screen

<Y> in response to the system's question concerning the correctness of the inputs, the data input by the user are added to the Equipment Custodian List database. At this point, EMIS asks the user if he/she has another record to input. If the answer is <N>, the system returns the user to the Equipment Custodian List menu. If the answer is <Y>, EMIS increments the Equipment Custodian Number and loops back to a blank input screen. Figure 38 is a flowchart of the program logic for the Equipment Custodian List add routine (CUSADD.PRG).

Updating a Record. If the user chooses the letter <B> from the Equipment Custodian List Menu, an input screen will appear with blank spaces beside the names of the Equipment Custodian List data elements. Figure 39 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the first and last Names of the equipment custodian whose record is to be updated. After the user inputs the first and last names, EMIS searches the Equipment Custodian List database for the record with that first and last name. If the system cannot locate the record in the database, the user is notified and asked if he/she would like to input another first and last name. If the answer is <N> to this question, EMIS returns the user to the Equipment Custodian List menu. If the answer is <Y>, the system prompts the user for a new equipment custodian name. If EMIS locates the requested record, it displays the data contained in that record on the screen. The user is then asked if the displayed record is

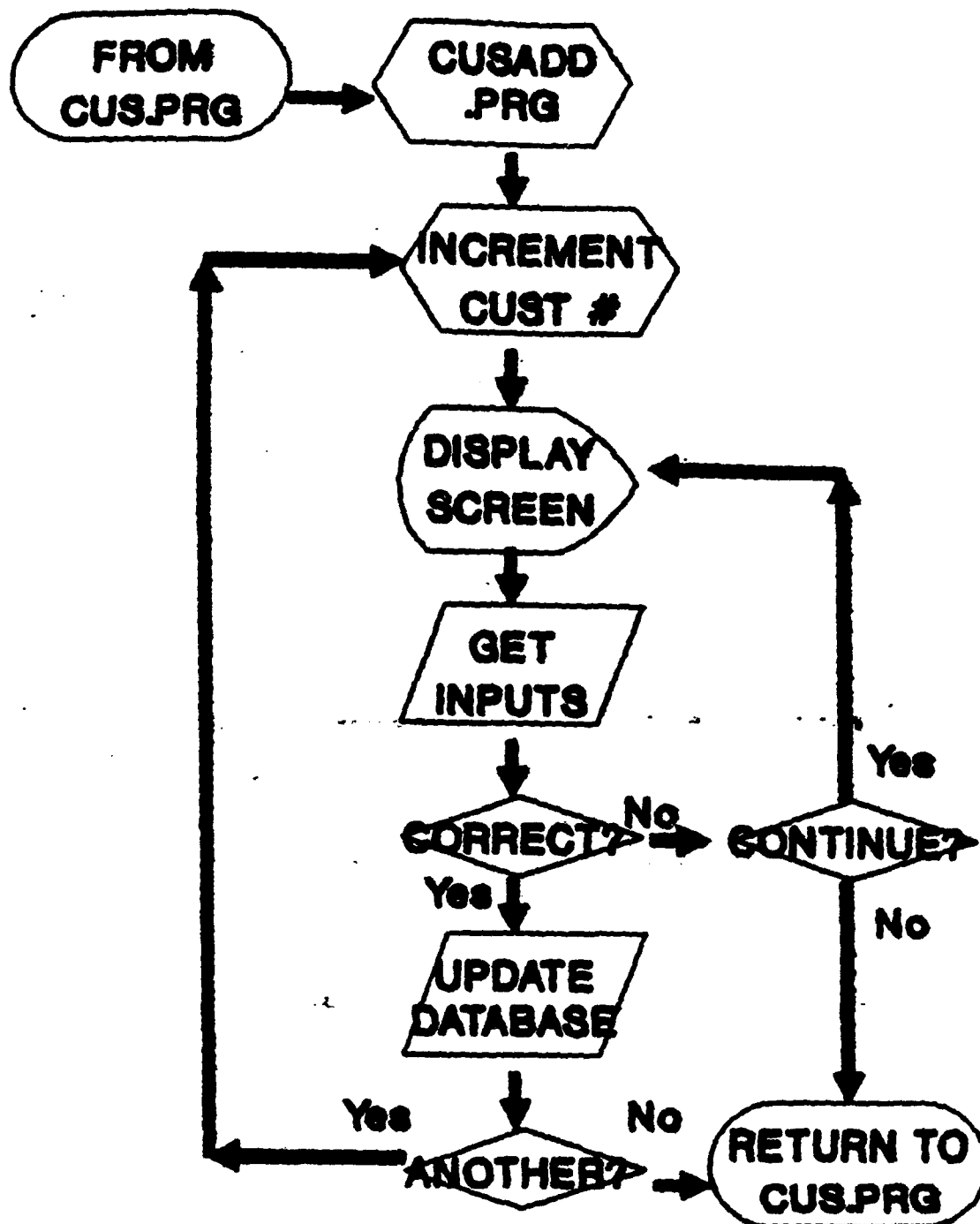


Figure 38. Flowchart of the Equipment Custodian List Add Routine (CUSADD.PRG)

## **EQUIPMENT CUSTODIAN EDIT ROUTINE**

**Grade: E7 Custodian Number: 0243**

**Name (First, Middle, Last): Dustin D. Poole**

**Telephone: 53089 53090**

**Date Trained: 7104 Projected Departure Date: None**

<b>Org/Shop Code: 111AT</b>	<b>Primary/Alternate: P</b>
<b>Org/Shop Code: 111ER</b>	<b>Primary/Alternate: P</b>
<b>Org/Shop Code: 111HQ</b>	<b>Primary/Alternate: A</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: _____</b>	<b>Primary/Alternate: -</b>

**Enter Custodian Name (First, Middle, Last): Dustin D. Poole**

Figure 39. Equipment Custodian List Edit Screen

the correct record. If the answer is <Y>, the system loops to the top of the edit screen and returns control of the keyboard to the user. If the answer is <N>, the user is then asked if he/she would like to continue. A reply of <N> results in the system returning the user to the Equipment Custodian List menu. If the answer is <Y>, EMIS again prompts the user for the equipment custodian's name whose record is to be updated. When the user completes the edit screen and presses <Y> in response to the system's question concerning the correctness of the inputs, the appropriate record is updated in the Equipment Custodian List database. At this point, EMIS asks the user if he/she wants to update another record. If the answer is <N>, the system returns the user to the Equipment Custodian List menu. If the answer is <Y>, the system prompts the user for the name of the custodian whose record is to be updated. Figure 40 is a flowchart of the program logic for the Equipment Custodian List edit routine (CUSEDT.PRG).

Deleting a Record. If the user chooses the letter <C> from the Equipment Custodian List Menu, a screen will appear with blank spaces beside the names of the Equipment Custodian List data elements. Figure 41 is a facsimile of this screen. At the bottom of the screen, the user will be prompted to provide the first and last names of the equipment custodian whose record is to be deleted. After the user inputs the name, the system searches the Equipment Custodian List database for the record with that name. If the system cannot locate the record in the

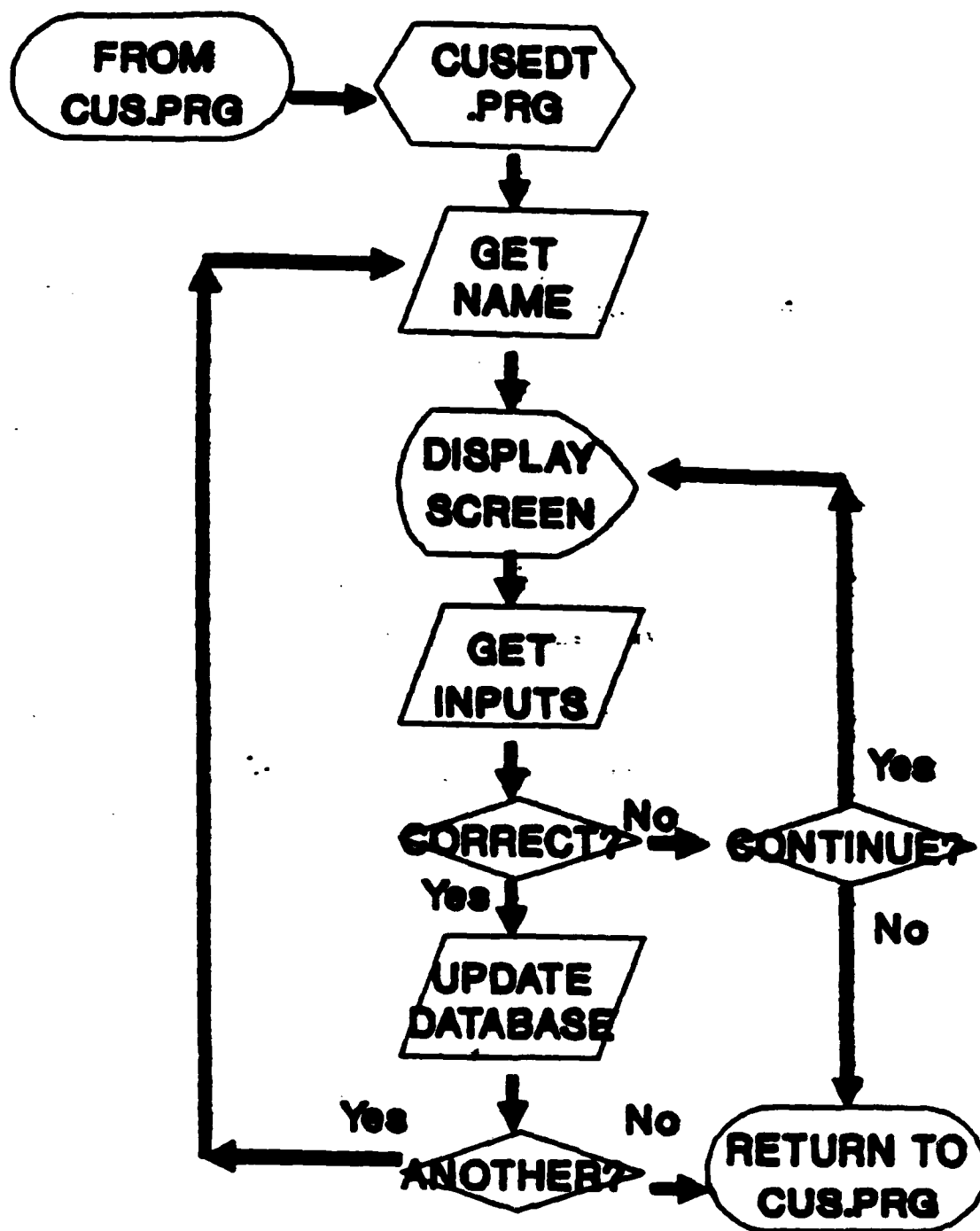


Figure 40. Flowchart of the Equipment Custodian List Edit Routine (CUSEDT.PRG)

## **EQUIPMENT CUSTODIAN DELETE ROUTINE**

**Grade: E7    Custodian Number: 0243**

**Name (First, Middle, Last): Dustin D. Poole**

**Telephone: 53089    53090**

**Date Trained: 7104    Projected Departure Date: None**

<b>Org/Shop Code: 111AT</b>	<b>Primary/Alternate: P</b>
<b>Org/Shop Code: 111ER</b>	<b>Primary/Alternate: P</b>
<b>Org/Shop Code: 111HQ</b>	<b>Primary/Alternate: A</b>
<b>Org/Shop Code: -----</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: -----</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: -----</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: -----</b>	<b>Primary/Alternate: -</b>
<b>Org/Shop Code: -----</b>	<b>Primary/Alternate: -</b>

**Are You Sure You Want To Delete This Record? (Y/N) --**

**Figure 41. Equipment Custodian List Delete Screen**

database, the user is notified and asked if he/she would like to input another name. If the answer is <N> to this question, EMIS returns the user to the Equipment Custodian List menu. If the answer is <Y>, the system prompts the user for a new first and last name. If the system locates the requested record, it displays the data contained in that record on the screen. The system then asks if the displayed record is the record the user wants to delete. If the answer is <N>, the user is asked if he/she wishes to continue. If the answer is <N>, the EMIS returns the user to the Equipment Custodian List menu. If the answer is <Y>, the system prompts the user for a new first and last name. When EMIS finds and displays a record and the user agrees that the record should be deleted, the user is then asked to confirm the deletion action. If the user again answers <Y>, EMIS will delete the record and notify the user that the record has been deleted. On the other hand, if the answer is <N>, the system asks the user if he/she wishes to continue. A reply of <N> results in the system returning the user to the Equipment Custodian List menu. If the answer is <Y>, the system again prompts the user for the name of the equipment custodian whose record is to be deleted. After a record is deleted, EMIS asks the user if he/she wants to delete another record. If the answer is <N>, the system returns the user to the Equipment Custodian List menu. If the answer is <Y>, the system prompts the user for the first and last names of the equipment custodian whose record is to be deleted. Figure 42 is a flowchart of

the program logic for the Equipment Custodian List delete routine (CUSDEL.PRG).

Reports Menu. If the user chooses the letter <D> from the Equipment Custodian List menu, the Equipment Custodian List Control Reports menu will appear. Figure 43 is a facsimile of this menu. From this menu, the user can send to the printer or to the screen four different types of reports. Reports can be generated which provide data on all of the custodians in the database, custodians trained on user-specified dates, custodians by name, and custodians by organization and shop code.

After the user selects a particular type of report by pressing <A>, <B>, <C>, or <D> from the reports menu, a screen appears which confirms the user's choice and gives the user an opportunity to choose whether to send the report to the printer or screen, or simply to abort the report. At this point, if the user presses <P>, the report will be sent to the printer. If an <S> is pressed, the report will be sent to the screen. If a <Q> is pressed, EMIS will return the user to the Equipment Custodian List Reports menu.

The user can also call up a Help program which provides information on the Equipment Custodian List reports. Finally, the user can quit the Equipment Custodian List reports module and return to the Equipment Custodian List main menu. Figure 44 is a flowchart of the program logic for the Equipment Custodian List reports routine (CUSRPT.PRG).

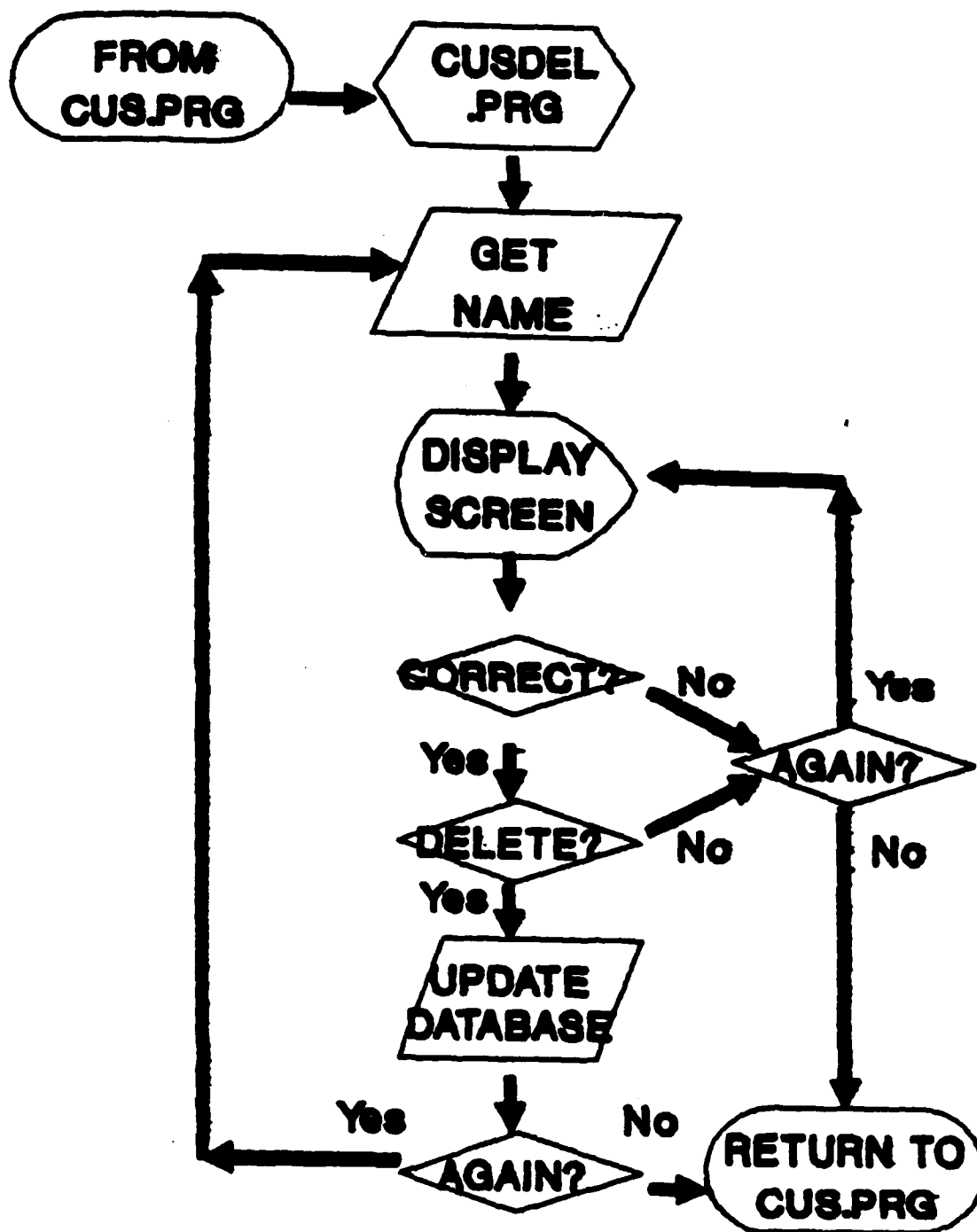


Figure 42. Flowchart of the Equipment Custodian List Delete Routine (CUSDEL.PRG)

# **EQUIPMENT CUSTODIAN REPORTS**

**DATE**  
**08/04/88**

**TIME**  
**08:54:18**

**[A] All Custodians**

**[B] By Training Date**

**[C] By Custodian Name**

**[D] By Org/Shop Code**

**[H] Help - How To Use This System**

**[Q] Quit**

**[Enter Selection (A - D, H, Q): :]**

Figure 43. Equipment Custodian List Reports Menu

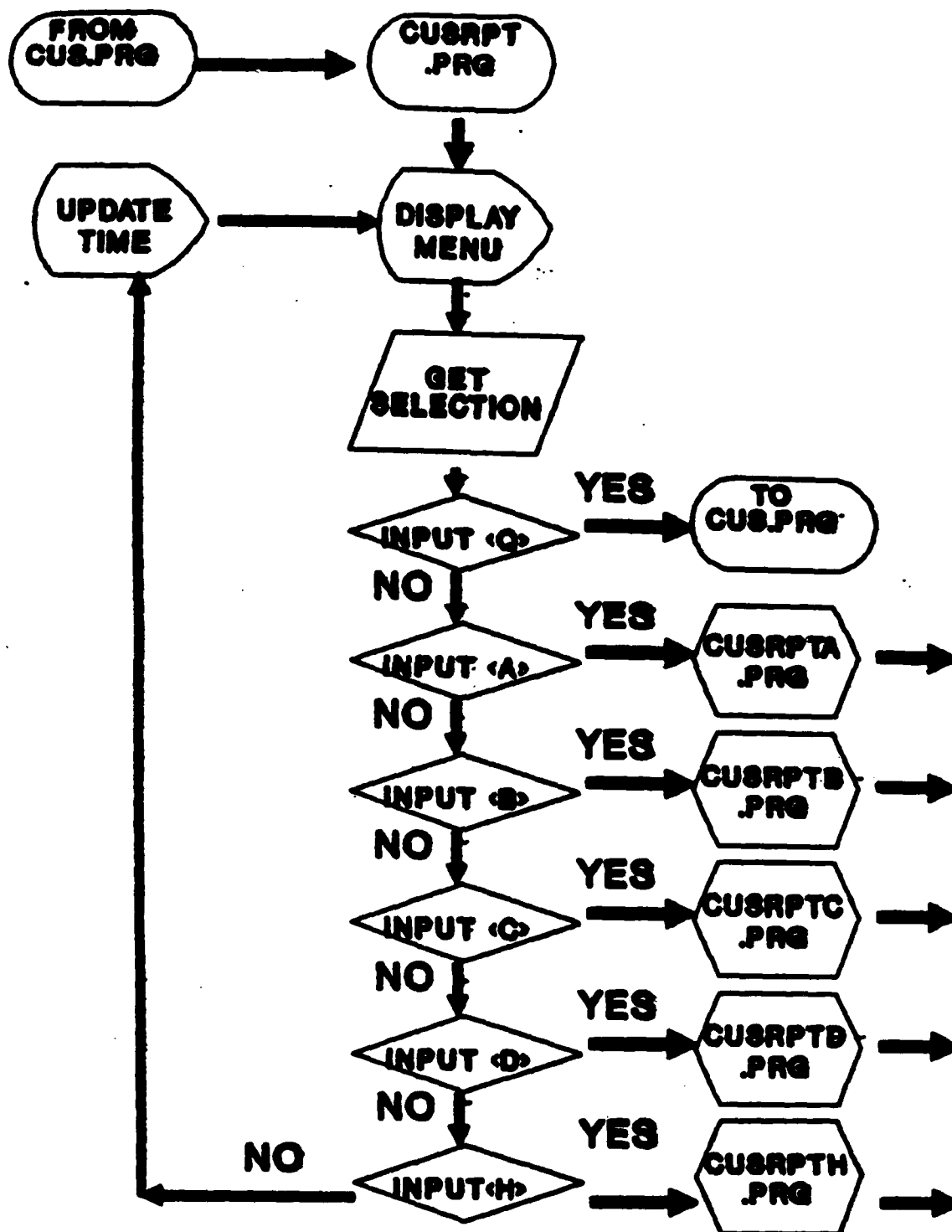


Figure 44. Flowchart of the Equipment Custodian List Reports Routine (CUSRPT.PRG)

## V. Summary, Conclusions, and Recommendations

### Summary

The objective of this study was to apply the principles of database management to the management of Air Force equipment items, with the overall goal being a reduction in error rates and training times at the retail level. Experts in the policies and procedures which make up the Air Force Equipment Management System provided information about the system along with their concerns about procedures which result in high error rates and training times. This information was analyzed, and a list of candidates for inclusion in a microcomputer-based management information system was developed. Then, using a formal method of information systems development, a management information system called the Equipment Management Information System (EMIS) was designed, developed, and tested. EMIS will be further tested and refined by the personnel in the Directorate of Supply at the Air Force Logistics Management Center prior to distribution to the Air Force major commands.

### Conclusions

During this study, five research questions were answered and a management information system was developed. These activities resulted in several conclusions being drawn.

There are seven major tasks performed in the Equipment Management Section which contribute to high error rates and

extended training times. Four of the tasks were found to be good candidates for automation on a microcomputer due, primarily, to the nature of the data used in those tasks. The remaining three tasks were found to be poor candidates for automation on stand-alone microcomputers. The automation of the latter three tasks will require specialized hardware or communications interfaces with mainframe computers. Fortunately, these tasks will be automated by a new computer system, called the Air Force Equipment Management System (AFEMS), being developed by the Air Force. AFEMS is scheduled for implementation in 1993.

Three of the four tasks found to be good candidates for automation were included in EMIS. The fourth task, the Air Force Form 601 certified file, will be added to the system by AFLMC personnel. While the Tables of Allowances review process was not found to be a good candidate for automation on a microcomputer, this procedure was declared by all experts interviewed to be the most important equipment management procedure negatively impacting error rates and training times. Since AFEMS will not provide automated Table of Allowances review capabilities for several years, the management and scheduling of this process was included in EMIS.

Several microcomputer-based database management software packages were compared prior to software development. Because there is a large base of knowledge in the Air Force for this package, and the software will be

compatible with dBASE IV (tm) and is available on GSA contracts, EMIS was written in dBASE III PLUS (tm) program code. The programs which comprise EMIS currently add to approximately 190 kilobytes. This size will allow EMIS, in conjunction with dBASE III PLUS (tm) to operate on the Air Force standard small computer with 512 kilobytes of Random Access Memory, a 20-megabyte or larger hard disk, and a printer.

EMIS has been examined by equipment technicians assigned to the WPAFB Equipment Management Section and by members of the AFLC Command Equipment Management Team. The response from both groups has been positive, and copies of the EMIS programs have been given to these offices for further testing and review.

#### Recommendations

Recommendations for further work focus on two areas. The first is the area of Air Force equipment management. The second is the area of potential microcomputer-based database applications to Air Force supply operations.

Air Force Equipment Management. The new Air Force Equipment Management System scheduled for completion in 1993 will go a long way toward improving the effectiveness and efficiency of equipment management technicians. AFEMS will provide an automated interface between the retail and wholesale levels and will greatly reduce the paperwork which flows between the two. AFEMS will also provide technicians with the capability to perform Tables of Allowances reviews

using computerized data instead of microfiche data. AFEMS will be designed to make the work easier for a person to complete. Unfortunately, in many cases, AFEMS will place work on-line, not eliminate it. AFEMS will automate the Tables of Allowances review, Equipment Out-of-Balance review, and Daily Transaction Reporting processes so that the data is accessible to technicians and the work is easy to accomplish. However, these, and other equipment management tasks, need to be studied for ways to automate the task, not just put the data on-line. For example, the Tables of Allowances review process requires a comparison of Standard Base Supply System records with each Table of Allowances when that TA is updated. The review process itself could be accomplished by the computer and, when discrepancies are found, management notices could be sent to equipment technicians and equipment custodians to notify them of required action. A study of equipment procedures, with the goal of truly automating those procedures, not just placing them on-line, should be accomplished while the AFEMS development effort is in its infancy.

#### Potential Database Applications in Air Force Supply.

While Air Force base supply organizations are supported by the Sperry 1100/60 Phase IV computer which performs SBSS operations, there are many administrative duties which do not fall within the purview of the SBSS. Most of these duties are required to be accomplished on a regular basis. For example, funds managers in the Funds Management Section of base supply are responsible for managing the General

Support Operating Program (GSOP). This requires tracking expenditures by organization, working with organizational funds managers to forecast future expenditures, and identifying potential problems through trend analysis. The Funds Management Section does not currently have any automated support for managing the GSOP (Bailey and Cohen, 1988:3). In addition to the GSOP, there are many tasks in base supply organizations which, if automated, could be accomplished more effectively and efficiently. These include, but are not limited to, the administrative tasks in the Document Control Section, the inspection tasks performed by Procedures and Standardization personnel, trend analysis, graphs, and briefing charts developed by the Management Analysis Section, and the many files kept by the Customer Support Office, Stock Control Section, Demand Processing Section, Reparable Asset Control Center, War Readiness Spares Kit Section, Retail Sales Section, and the Fuels Branch. In addition, there is a great deal of training continually being administered to supply customers as well as supply technicians. Microcomputer-based systems are capable of managing this training, and assisting in the creation of training lectures and briefing charts.

Future work in microcomputer-based systems should follow a rigorous set of systems development stages like the stages used during this research. This will help to ensure the final product meets the needs of, and is satisfactory to, the intended users.

Appendix A: Equipment Management Information System  
Data Dictionary

The EMIS data dictionary is organized by database. The four databases are AFFM600.DBF, TA.DBF, RES.DBF, and CUS.DBF. Within each database, data elements are sorted alphabetically by common name. The template column reveals the characters EMIS will accept as inputs to that field. An 'A' denotes that an alpha character is required, a '9' denotes that a numeric character is required, and an 'X' denotes that either an alpha or numeric character is allowed.

AFFM600.DBF

<u>Common Name</u>	<u>Data Element</u>	<u>Type</u>	<u>Length</u>	<u>Template</u>
Completion Action	COMPL_ACT	Char	10	XXXXXXXXXX
Control Number	CONTROL_NR	Num	5	9999
Date Forwarded	FWD_DT	Num	4	9999
Date Received	RCVD_DT	Num	4	9999
Date Returned	RTN_DT	Num	4	9999
Detail Number	DETAIL	Num	4	9999
Forwarded To	FWD_TO	Char	1	X
Nomenclature	NAME	Char	20	XXXXXXXXXXXXXXXXXXXX
Organization	ORG/SHOP	Char	5	999AA
Requested Action	ACTION	Char	3	AAA
Request Number	REQUEST_NR	Num	8	99999999
Stock Number	STK_NR	Char	15	9999XXXXXXXXAA
Type Code	EQUIPCODE	Char	1	A

TA.DBF

<u>Common Name</u>	<u>Data Element</u>	<u>Type</u>	<u>Length</u>	<u>Template</u>
Date Due	TA_DUE	Num	4	9999
Date Forwarded	TA_FWD_DT	Num	4	9999
Date Published	TA_DT	Num	4	9999
Date Received	TA_RCVD	Num	4	9999
Date Returned	TA_RTN	Num	4	9999
Forwarded To	TA_FWD_TO	Char	1	X
TA Number	TA_NR	Num	3	999

RES.DBF

<u>Common Name</u>	<u>Data Element</u>	<u>Type</u>	<u>Length</u>	<u>Template</u>
A Bag	ABAG	Num	3	999
Auth TA(1)	TA1	Num	3	999
Auth TA(2)	TA2	Num	3	999
Auth TA(3)	TA3	Num	3	999

Auth TA(4)	TA4	Num	3	999
Auth TA(5)	TA5	Num	3	999
Auth TA(6)	TA6	Num	3	999
Auth TA(7)	TA7	Num	3	999
B Bag	BBAG	Num	3	999
Building(1)	BLDG1	Num	4	9999
Building(2)	BLDG2	Num	4	9999
Building(3)	BLDG3	Num	4	9999
Building(4)	BLDG4	Num	4	9999
Building(5)	BLDG5	Num	4	9999
Building(6)	BLDG6	Num	4	9999
Building(7)	BLDG7	Num	4	9999
Building(8)	BLDG8	Num	4	9999
C Bag	CBAG	Num	3	999
Enlisted Count	AUTH_ENL	Num	3	999
Office Symbol	OFFICE	Char	12	XXXXXXXXXXXX
Officer Count	AUTH_OFF	Num	3	999
Organization	ORGSHP	Char	5	999AA
Senior Grade	GRADE	Char	2	A9
Total SF	SQF	Num	6	999999
Utility Bag	UBAG	Num	3	999

CUS.DBF

<u>Common Name</u>	<u>Data Element</u>	<u>Type</u>	<u>Length</u>	<u>Template</u>
Customer Number	CUSNR	Num	3	999
First Name	FNAME	Char	15	AAAAAAAAAAAAAAAA
Grade	GRADE	Char	2	A9
Last Name	LNAME	Char	20	AAAAAAAAAAAAAAAAAAAA
Middle Initial	MI	Char	1	A
Organization(1)	ORGSHP1	Char	5	999AA
Organization(2)	ORGSHP2	Char	5	999AA
Organization(3)	ORGSHP3	Char	5	999AA
Organization(4)	ORGSHP4	Char	5	999AA
Organization(5)	ORGSHP5	Char	5	999AA
Organization(6)	ORGSHP6	Char	5	999AA
Organization(7)	ORGSHP7	Char	5	999AA
Organization(8)	ORGSHP8	Char	5	999AA
Prime/Alt1	PA1	Char	1	A
Prime/Alt2	PA2	Char	1	A
Prime/Alt3	PA3	Char	1	A
Prime/Alt4	PA4	Char	1	A
Prime/Alt5	PA5	Char	1	A
Prime/Alt6	PA6	Char	1	A
Prime/Alt7	PA7	Char	1	A
Prime/Alt8	PA8	Char	1	A
Projected PCS	DPRTDT	Num	4	9999
Telephone	PHONE1	Num	5	99999
Telephone(Alt)	PHONE2	Num	5	99999
Training Date	TRAINDT	Num	4	9999

Appendix B: Equipment Management Information System  
Program Code

\*\*\*\*\*

\* Program.: EMIS.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes...: Equipment Management Information System Main Menu

CLOSE ALL  
CLEAR MEMORY  
SET BELL OFF  
SET ESCAPE OFF  
SET HEADING OFF  
SET HELP OFF  
SET MENU OFF  
SET SAFETY OFF  
SET SCOREBOARD OFF  
SET STATUS OFF  
SET TALK OFF  
SET CONFIRM OFF  
SET COLOR TO W/B

IF ISCOLOR()  
SET COLOR OFF  
ENDIF

DO WHILE .T.  
CLEAR

DO WHILE .T.  
TODAY=DATE()

DO MAINVIEW

I=0

DO WHILE I=0  
I=INKEY()  
● 8,39 SAY TIME()  
● 22,60 SAY "

IF UPPER(CHR(I))# "ABCDHQ"  
EXIT

ENDIF

I=0  
ENDDO

● 22,60 SAY UPPER(CHR(I))

DO CASE

CASE CHR(I) # "Qq"  
SAVE TO EMIS.MEM

```

SET BELL ON
SET ESCAPE ON
SET HEADING ON
SET HELP ON
SET MENU ON
SET SAFETY ON
SET SCOREBOARD ON
SET STATUS ON
SET TALK ON
SET COLOR TO W/N
CLEAR ALL
CLEAR
@12, 32 SAY ' HAVE A NICE DAY! '
RETURN

```

```

CASE CHR(1) # 'Aa'
CLEAR
CLOSE ALL
DO 600

```

```

CASE CHR(1) # 'Bb'
CLEAR
CLOSE ALL
DO TA

```

```

CASE CHR(1) # 'Cc'
CLEAR
CLOSE ALL
DO RES

```

```

CASE CHR(1) # 'Dd'
CLEAR
CLOSE ALL
DO CUS

```

```

CASE CHR(1) # 'Hh'
CLEAR
CLOSE ALL
DO MAINHELP

```

ENDCASE

ENDDO

\* EOF: EMIS.PRG

\*\*\*\*\*

```

* Program.: MAINVIEW.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Main Menu Screen For Equipment Management Information System
*           Called from EMIS.PRG

```

● 1,9 TO 3,69

```

● 4,1 TO 20,77 DOUBLE
● 2,12 SAY 'E Q U I P M E N T   M A N A G E M E N T   S Y S T E M'
● 8,20 SAY '[A] Air Force Form 600 Control Log'
● 10,20 SAY '[B] Tables of Allowances Review List'
● 12,20 SAY '[C] Configuration Data/Resume File'
● 14,20 SAY '[D] Equipment Custodian List'
● 16,20 SAY '[H] Help - How To Use This System'
● 18,20 SAY '[Q] Quit'
● 5,25 SAY 'DATE           TIME'
● 6,23 SAY TODAY
● 6,39 SAY TIME()
● 22,8 SAY '[Enter Selection (A - D, H for help, or Q to quit) : :]'

```

RETURN

\* EOF: MAINVIEW.PRG

\*\*\*\*\*

```

* Program.: DATETIME.PRG
* Author...: Capt Jeff Bailey
* Last Revision: July 22, 1988
* Notice...: Copyright 1988
* Notes....: Put Date and Time on the Screen
*

```

DO WHILE .T.

TODAY=DATE()

```

● 6,25 SAY 'DATE           TIME'
● 7,23 SAY TODAY
● 7,39 SAY TIME()

```

I=0

DO WHILE I=0

I=INKEY()

```

● 7,39 SAY TIME()
● 22,60 SAY ''

```

IF UPPER(CHR(I))# 'ABCDHQ'

EXIT

ENDIF

I=0

ENDDO

\*● 22,60 SAY UPPER(CHR(I))

ENDDO

\*EOF: DATETIME.PRG

\*\*\*\*\*

```

* Program.: MAINHELP.PRG
* Author...: Capt Jeff Bailey

```

\* Last Revision: 9 August 1988  
\* Notes....: HELP and System Information for the Equipment Management  
\* Information System  
\* Called From EMIS.PRG

CLEAR

TEXT

Welcome to the Equipment Management Information System.  
This is a menu-driven information system designed to help manage  
some of the administrative tasks required of the Base Supply  
Equipment Management Section.

Currently, this system helps manage the following tasks:

```
*****  
*                                     *  
*      Air Force Form 600 Log        *  
*                                     *  
*      Tables of Allowances Review List *  
*                                     *  
*      Configuration Data/Resume File *  
*                                     *  
*      Equipment Custodian List      *  
*                                     *  
*****
```

Each of the tasks has its own HELP facility available from  
the menu for that task. Air Force Manual 67-1, Volume II, Part 2  
references for each task are provided in the appropriate HELP  
facility.

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

All functions in this system are accessed by depressing  
a single key. Throughout the HELP screens, we will use the  
following convention to denote that a particular key should be  
depressed:

[ ]

For example, to access the Air Force Form 600 function from  
the MAIN MENU you should press the letter A. We denote this by  
saying 'To access the Air Force Form 600 function press [A].'

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

\*\*\*\*\*

From the Equipment Management Information System MAIN MENU,  
press the following letters to begin working:

To access the Air Force Form 600 function press [A]

To access the Tables of Allowances Review List press [B]

To access the Configuration Data/Resume List press [C]

To access the Equipment Custodian list press [D]

To quit using the system press [Q]

\*\*\*\*\*

ENDTEXT

WAIT SPACE(20) + 'Press any key to receive System Information.'

CLEAR

TEXT

This system is written in dBASE III PLUS (tm) and designed  
to run on a Zenith Z-248 computer (or compatible) running MSDOS 3.2  
or higher, with a Winchester hard disk drive and a 132 column printer.

The system is modularly designed so current tasks can be  
easily updated and improved, and new tasks can be quickly added.

If you have comments, complaints, or suggestions about this  
system, please contact us. We want this system to help you do your  
job better and easier. If you find errors, or you have suggestions  
for improvements, you can help by communicating your thoughts to us:

\*\*\*\*\*  
\* AFLMC/LGS \*  
\* Attn: Capt Jeff Bailey \*  
\* Gunter AFB \*  
\* Montgomery, AL 36104 \*  
\*\*\*\*\*

This disk contains the Equipment Management Information System,  
Version 1.0, revision date: August 1988

ENDTEXT

WAIT SPACE(20) + 'Press any key to return to the MAIN MENU.'

CLEAR

RETURN

\* EOF: MAINHELP.PRG

\*\*\*\*\*

\* Program.: NORECORD.PRG

\* Author...: Capt Jeff Bailey

\* Last Revision: 9 August 1988

\* Notes...: Check Database To See If It has Any Records

\*

\* Check To See If The File Contains Any Records

IF RECCOUNT() = 0

    @ 15,15 SAY 'There are no records in the file.'

    @ 21,15

    WAIT SPACE(15) + 'Press any key to return to the MAIN MENU'

    CLOSE DATABASES

    CLEAR

    RETURN TO MASTER

ENDIF

RETURN

\*EOF: NORECORD.PRG

\*\*\*\*\*

\* Program.: PAUSE.PRG

\* Author...: Capt Jeff Bailey

\* Last Revision: 9 August 1988

\* Notes...: Pause to allow user to view the screen

\*

MPAUSE = 0

DO WHILE MPAUSE < 35

    MPAUSE = MPAUSE + 1

ENDDO

RETURN

\*EOF: PAUSE.PRG

\*\*\*\*\*

\* Program.: 600.PRG

\* Author...: Capt Jeff Bailey

\* Last Revision: 9 August 1988

\* Notes....: Perform AF Form 600 Equipment Control Register operations  
\* Called from EMIS.PRG

USE AFFM300

DO WHILE .T.

TODAY=DATE()

CLEAR

● 1,9 TO 3,72

● 2,11 SAY 'A I R F O R C E F O R M 6 0 0 '

● 2,57 SAY 'C O N T R O L L O G'

● 4,1 TO 20,77 DOUBLE

● 5,25 SAY 'DATE TIME'

● 6,23 SAY TODAY

● 6,39 SAY TIME()

● 8,20 SAY '[A] Add Records To The Log'

● 10,20 SAY '[B] Update Records Previously Logged In'

● 12,20 SAY '[C] Delete Records Previously Logged In'

● 14,20 SAY '[D] Reports'

● 16,20 SAY '[H] Help - How To Use This System'

● 18,20 SAY '[Q] Quit'

● 22,8 SAY '[Enter Selection (A - D, H for help, or Q to quit) : :]'

I=0

DO WHILE I=0

I=INKEY()

● 6,39 SAY TIME()

● 22,60 SAY ''

IF UPPER(CHR(I))# 'ABCDHQ'

EXIT

ENDIF

I=0

ENDDO

● 22,60 SAY UPPER(CHR(I))

DO CASE

CASE CHR(I) # 'Qq'

SAVE TO 600.MEM

CLEAR ALL

CLEAR

CLOSE DATABASES

RETURN

CASE CHR(I) # 'Aa'

CLEAR

CLOSE ALL

DO 600ADD

CASE CHR(I) # 'Bb'

CLEAR

CLOSE ALL

DO 600EDT

```
CASE CHR(1) * 'Cc'
CLEAR
CLOSE ALL
DO 600DEL
```

```
CASE CHR(1) * 'Dd'
CLEAR
CLOSE ALL
DO 600RPT
```

```
CASE CHR(1) * 'Hh'
CLEAR
CLOSE ALL
DO 600HLP
```

ENDCASE

ENDDO

\* EOF: 600.PRG

\*\*\*\*\*

```
* Program.: 600ADD.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Add records to the Air Force Form 600 Equipment
*             Control Register
*             Called from 600.PRG
```

USE AFFM600

DO WHILE .T.

```
GO BOTTOM
* Initialize Memory Variables
STORE SPACE(1) TO MEQUIP
STORE 0000 TO MRCVD
STORE CONTROL_NR+1 TO MCONTROL
STORE 0000 TO MDETAIL
STORE SPACE(5) TO MORG
STORE 00000000 TO MREQUEST
STORE SPACE(15) TO MNSN
STORE SPACE(20) TO MNAME
STORE SPACE(3) TO MACTION
STORE 0000 TO MFWD
STORE SPACE(1) TO MTO
STORE 0000 TO MRTND
STORE SPACE(10) TO MCOMPL
```

```
* Draw Input Screen
CLEAR
DO WHILE .T.
    TODAY=DATE()
```

```

CLEAR
● 1,9 TO 3,71
● 2,11 SAY 'A I R   F O R C E   F O R M   6 0 0   A D D   '
● 2,57 SAY ' R O U T I N E '
● 6,0 TO 20,77 DOUBLE
● 7,48 SAY 'EMS Control Number: ' GET MCONTROL PICTURE '99999'
CLEAR GETS
● 7,3 SAY 'Equipment Code: ' GET MEQUIP PICTURE 'A'
● 7,24 SAY 'Org/Shop Code: ' GET MORG PICTURE '999AA'
● 9,3 SAY 'Custodian Request Number: ';
GET MREQUEST PICTURE '99999999'
● 9,47 SAY 'In-Use Document Number: ' GET MDETAIL PICTURE '9999'
● 11,3 SAY 'NSN or Part Number: ';
GET MNSN PICTURE '9999XXXXXXXXXXAA'
● 11,50 SAY 'Action Requested: ' GET MACTION PICTURE 'AAA'
● 13,3 SAY 'Nomenclature: ';
GET MNAME PICTURE 'XXXXXXXXXXXXXXXXXXXXX'
● 15,3 SAY 'Date Received ' GET MRCVD PICTURE '9999'
● 15,25 SAY 'Date Forwarded: ' GET MFWD PICTURE '9999'
● 15,50 SAY 'Forwarded To: ' GET MTO PICTURE 'X'
● 17,3 SAY 'Date Returned: ' GET MRTND PICTURE '9999'
● 19,3 SAY 'Completion Action: ' GET MCOMPL PICTURE 'XXXXXXXXXX'
READ
* Check For Correct Entry
CORRECT=' '
DO WHILE .NOT. CORRECT*'YyNn'
  ● 22,15 SAY 'Is This Correct? (Y/N)' GET CORRECT
  READ
  ● 22,15
ENDDO

IF UPPER(CORRECT)='N'
  GOON=' '
  DO WHILE .NOT. GOON*'YyNn'
    ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
    READ
    ● 22,15
  ENDDO

  IF UPPER(GOON)='N'
    ●22,15 SAY 'Returning to AF Form 600 Main Menu'
    CLEAR
    RETURN
  ENDIF
ENDIF
ENDDO
ENDIF

APPEND BLANK
REPLACE EQUIPCODE WITH MEQUIP
REPLACE RCVD_DT WITH MRCVD
REPLACE CONTROL_NR WITH MCONTROL
REPLACE DETAIL WITH MDETAIL
REPLACE ORG_SHOP WITH MORG
REPLACE REQUEST_NR WITH MREQUEST
REPLACE STK_NR WITH MNSN

```

REPLACE NAME WITH MNAME  
 REPLACE ACTION WITH MACTION  
 REPLACE FWD\_DT WITH MFWD  
 REPLACE FWD\_TO WITH MTO  
 REPLACE RTN\_DT WITH MRTND  
 REPLACE COMPL\_ACT WITH MCOMPL

\* Check For Another Input  
 ANOTHER=' '

DO WHILE .NOT. ANOTHER# 'YyNn'  
   @22,15 SAY 'Input Another Record? (Y/N)' GET ANOTHER  
   READ  
   @ 22,15  
 ENDDO

IF UPPER (ANOTHER)='Y'  
   CLEAR  
   EXIT  
 ENDIF

IF UPPER (ANOTHER)='N'  
   @22,15 SAY 'Returning to AF Form 600 Main Menu'  
   CLEAR  
   RETURN  
 ENDIF

CLEAR

ENDDO

ENDDO

\* EOF: 600ADD.PRG

\*\*\*\*\*

\* Program.: 600EDT.PRG  
 \* Author...: Capt Jeff Bailey  
 \* Last Revision: 9 August 1988  
 \* Notes...: Edit records in the Air Force Form 600 Equipment  
           Control Register  
           Called from 600.PRG

USE AFFM600

DO NORECORD

DO WHILE .T.  
   \* Initialize Memory Variables  
   STORE SPACE(1) TO MEQUIP  
   STORE 0000 TO MRCVD  
   STORE 00000 TO MCONTROL  
   STORE 0000 TO MDETAIL  
   STORE SPACE(5) TO MORG

```

STORE 00000000 TO MREQUEST
STORE SPACE(15) TO MMSN
STORE SPACE(20) TO MNAME
STORE SPACE(3) TO MACTION
STORE 0000 TO MFWD
STORE SPACE(1) TO MTO
STORE 0000 TO MRTND
STORE SPACE(10) TO MCOMPL

```

```

* Draw Input Screen

```

```

CLEAR

```

```

● 1,8 TO 3,72
● 2,10 SAY 'A I R   F O R C E   F O R M   6 0 0   E D I T '
● 2,57 SAY ' R O U T I N E '
● 6,0 TO 20,77 DOUBLE
● 7,3 SAY 'Equipment Code: '
● 7,24 SAY 'Org/Shop Code: '
● 7,48 SAY 'EMS Control Number: '
● 9,3 SAY 'Custodian Request Number: '
● 9,47 SAY 'In-Use Document Number: '
● 11,3 SAY 'MSN or Part Number: '
● 11,50 SAY 'Action Requested: '
● 13,3 SAY 'Nomenclature: '
● 15,3 SAY 'Date Received: '
● 15,25 SAY 'Date Forwarded: '
● 15,50 SAY 'Forwarded To: '
● 17,3 SAY 'Date Returned: '
● 19,3 SAY 'Completion Action: '

```

```

* Input Control Number

```

```

● 22,15 SAY 'Enter Control Number' GET MCONTROL PICTURE '99999'

```

```

READ

```

```

* Search For Requested Control Number

```

```

LOCATE FOR CONTROL_NR = MCONTROL

```

```

IF .NOT. FOUND()

```

```

* Control Number Is Not In The Log

```

```

● 22,15

```

```

● 22,15 SAY 'Control Number' GET MCONTROL PICTURE '99999'

```

```

● 22,36 SAY 'cannot be found.'

```

```

CLEAR GETS

```

```

GOON = ' '

```

```

DO WHILE .NOT. GOON# 'YyNn'

```

```

● 23,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

```

```

READ

```

```

ENDDO

```

```

IF UPPER(GOON) = 'N'

```

```

● 23,15 SAY 'Returning to AF Form 600 Main Menu'

```

```

CLEAR

```

```

RETURN

```

```

ENDIF

```

```

CLEAR

```

```

LOOP

```

```

ENDIF
* If Record Is Located, Display Data
● 6,0 TO 20,77
● 7,48 SAY 'EMS Control Number: ' GET MCONTROL PICTURE '99999'
● 7,3 SAY 'Equipment Code: ' GET EQUIPCODE PICTURE 'A'
● 7,24 SAY 'Org/Shop Code: ' GET ORG_SHOP PICTURE '999AA'
● 9,3 SAY 'Custodian Request Number: ';
GET REQUEST_NR PICTURE '999999999'
● 9,47 SAY 'In-Use Document Number: ' GET DETAIL PICTURE '9999'
● 11,3 SAY 'NSN or Part Number: ';
GET STK_NR PICTURE '9999XXXXXXXXXAA'
● 11,50 SAY 'Action Requested: ' GET ACTION PICTURE 'AAA'
● 13,3 SAY 'Nomenclature: ';
GET NAME PICTURE 'XXXXXXXXXXXXXXXXXXXXX'
● 15,3 SAY 'Date Received ' GET RCVD_DT PICTURE '9999'
● 15,25 SAY 'Date Forwarded: ' GET FWD_DT PICTURE '9999'
● 15,50 SAY 'Forwarded To: ' GET FWD_TO PICTURE 'X'
● 17,3 SAY 'Date Returned: ' GET RTN_DT PICTURE '9999'
● 19,3 SAY 'Completion Action: ';
GET COMPL_ACT PICTURE 'XXXXXXXXXX'
CLEAR GETS
CORRECT = ' '
DO WHILE .NOT. CORRECT# 'YyNn'
  ● 22,15
  ● 22,15 SAY 'Is this the correct record? (Y/N)' GET CORRECT
  READ
ENDDO
IF UPPER(CORRECT)='N'
  ● 22,15
  GOON = ' '
  DO WHILE .NOT. GOON# 'YyNn'
    ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
    READ
    ● 22,15
  ENDDO
  IF UPPER(GOON)='N'
    ● 22,15 SAY 'Returning to AF Form 600 Main Menu'
    CLEAR
    RETURN
  ENDIF
  LOOP
ENDIF
DO WHILE .T.
  ● 7,3 SAY 'Equipment Code: ' GET EQUIPCODE PICTURE 'A'
  ● 7,24 SAY 'Org/Shop Code: ' GET ORG_SHOP PICTURE '999AA'
  ● 9,3 SAY 'Custodian Request Number: ';
  GET REQUEST_NR PICTURE '999999999'
  ● 9,47 SAY 'In-Use Document Number: ' GET DETAIL PICTURE '9999'
  ● 11,3 SAY 'NSN or Part Number: ';
  GET STK_NR PICTURE '9999XXXXXXXXXAA'
  ● 11,50 SAY 'Action Requested: ' GET ACTION PICTURE 'AAA'
  ● 13,3 SAY 'Nomenclature: ';
  GET NAME PICTURE 'XXXXXXXXXXXXXXXXXXXXX'
  ● 15,3 SAY 'Date Received ' GET RCVD_DT PICTURE '9999'
  ● 15,25 SAY 'Date Forwarded: ' GET FWD_DT PICTURE '9999'

```

```

● 15,50 SAY 'Forwarded To: ' GET FWD_TO PICTURE 'X'
● 17,3 SAY 'Date Returned: ' GET RTN_DT PICTURE '9999'
● 19,3 SAY 'Completion Action: ';
GET COMPL_ACT PICTURE 'XXXXXXXXXX'
●22,15 SAY 'Go ahead and make the necessary changes.'
READ
●22,15

* Check For Correct Entry
CORRECT = ' '
DO WHILE .NOT. CORRECT# 'YyNn'
    ● 22,15 SAY 'Is This Correct? (Y/N)' GET CORRECT
    READ
    ● 22,15
ENDDO

IF UPPER(CORRECT) = 'N'
    GOON = ' '

    DO WHILE .NOT. GOON# 'YyNn'
        ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
        READ
        ● 22,15
    ENDDO

    IF UPPER(GOON) = 'N'
        ●22,15 SAY 'Returning to AF Form 600 Main Menu'
        CLEAR
        RETURN
    ENDIF
ENDDO
ENDIF

MEQUIP = EQUIPCODE
MRCVD = RCVD_DT
MDETAIL = DETAIL
MORG = ORG_SHOP
MREQUEST = REQUEST_NR
MNSN = STK_NR
MNAME = NAME
MACTION = ACTION
MFWD = FWD_DT
MTO = FWD_TO
MRTND = RTN_DT
MCOMPL = COMPL_ACT

REPLACE EQUIPCODE WITH MEQUIP
REPLACE RCVD_DT WITH MRCVD
REPLACE DETAIL WITH MDETAIL
REPLACE ORG_SHOP WITH MORG
REPLACE REQUEST_NR WITH MREQUEST
REPLACE STK_NR WITH MNSN
REPLACE NAME WITH MNAME
REPLACE ACTION WITH MACTION
REPLACE FWD_DT WITH MFWD

```

REPLACE FWD\_TO WITH MTO  
REPLACE RTM\_DT WITH MRTND  
REPLACE COMPL\_ACT WITH MCOMPL

```
* Check For Another Edit
ANOTHER = ' '
DO WHILE .NOT. ANOTHER#`YyNn`
    @22,15 SAY `Update Another Record? (Y/N)` GET ANOTHER
    READ
    @ 22,15
ENDDO

IF UPPER (ANOTHER)='N'
    @22,15 SAY `Returning to AF Form 600 Main Menu`
    CLEAR
    RETURN
ENDIF
```

ENDDO  
ENDDO

\* EOF: 600EDT.PRG

\*\*\*\*\*

```
* Program.: 600DEL.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Delete records from the Air Force Form 600
*             Equipment Control Register
*             Called from 600.PRG
```

USE AFFM600

DO WHILE .T.

DO NORECORD

DO WHILE .T.

```
* Initialize Memory Variables
STORE SPACE(1) TO MEQUIP
STORE 0000 TO MRCVD
STORE 00000 TO MCONTROL
STORE 0000 TO MDETAIL
STORE SPACE(5) TO MORG
STORE 00000000 TO MREQUEST
STORE SPACE(15) TO MNSN
STORE SPACE(20) TO MNAME
STORE SPACE(3) TO MACTION
STORE 0000 TO MFWD
STORE SPACE(1) TO MTO
STORE 0000 TO MRTND
STORE SPACE(10) TO MCOMPL
```

DO WHILE .T.

```

* Draw Screen
CLEAR
  ● 1,6 TO 3,73
  ● 2,8 SAY 'A I R F O R C E   F O R M   6 0 0   D E L E T E   '
  ● 2,50 SAY 'R O U T I N E'
  ● 4,1 TO 20,77 DOUBLE
  ● 7,48 SAY 'EMS Control Number: '
  ● 7,3 SAY 'Equipment Code: '
  ● 7,24 SAY 'Org/Shop Code: '
  ● 9,3 SAY 'Custodian Request Number: '
  ● 9,47 SAY 'In-Use Document Number: '
  ● 11,3 SAY 'NSN or Part Number: '
  ● 11,50 SAY 'Action Requested: '
  ● 13,3 SAY 'Nomenclature: '
  ● 15,3 SAY 'Date Received: '
  ● 15,25 SAY 'Date Forwarded: '
  ● 15,50 SAY 'Forwarded To: '
  ● 17,3 SAY 'Date Returned: '
  ● 19,3 SAY 'Completion Action: '

* Input Control Number
  ● 22,15 SAY 'Enter Control Number' GET MCONTROL PICTURE '99999'
  READ

* Search for requested control number
  LOCATE FOR CONTROL_NR = MCONTROL

  IF .NOT. FOUND()
    * CONTROL NUMBER IS NOT IN THE LOG
    ● 22,15 SAY SPACE(50)
    ● 21,15 SAY 'Control Number' GET MCONTROL PICTURE '99999'
    ● 21,36 SAY 'cannot be found.'
    CLEAR GETS
    GOON = ' '

    DO WHILE .NOT. GOON# 'YyNn'
      ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
      READ
    ENDDO

    IF UPPER(GOON) = 'N'
      ● 22,15 SAY SPACE(50)
      ● 22,15 SAY 'Returning to AF Form 600 Main Menu'
      CLEAR
      RETURN
    ENDIF
    CLEAR
    LOOP
  ENDIF

* If record is located, display data
  ● 7,3 SAY 'Equipment Code: ' GET EQUIPCODE PICTURE 'A'
  ● 7,24 SAY 'Org/Shop Code: ' GET ORG_SHOP PICTURE '999AA'
  ● 7,48 SAY 'EMS Control Number: ' GET MCONTROL PICTURE '99999'
  ● 9,3 SAY 'Custodian Request Number: ';
  GET REQUEST_NR PICTURE '99999999'

```

```

● 9,47 SAY 'In-Use Document Number: ' GET DETAIL PICTURE '9999'
● 11,3 SAY 'NSN or Part Number: ';
GET STK_NBR PICTURE '9999XXXXXXXXXXAA'
● 11,50 SAY 'Action Requested: ' GET ACTION PICTURE 'AAA'
● 13,3 SAY 'Nomenclature: ';
GET NAME PICTURE 'XXXXXXXXXXXXXXXXXXXXX'
● 15,3 SAY 'Date Received ' GET RCVD_DT PICTURE '9999'
● 15,25 SAY 'Date Forwarded: ' GET FWD_DT PICTURE '9999'
● 15,50 SAY 'Forwarded To: ' GET FWD_TO PICTURE 'X'
● 17,3 SAY 'Date Returned: ' GET RTN_DT PICTURE '9999'
● 19,3 SAY 'Completion Action: ';
GET COMPL_ACT PICTURE 'XXXXXXXXXX'
CLEAR GETS

```

```

MCORRECT = ' '
DO WHILE .NOT. MCORRECT#`YyNn`
  ● 22,15 SAY SPACE(50)
  ● 21,15 SAY 'Is this the record you want to delete? (Y/N)';
  GET MCORRECT
  READ
ENDDO
IF UPPER(MCORRECT)='N'
  ● 22,15 SAY SPACE(50)
  MGOON = ' '
  DO WHILE .NOT. MGOON#`YyNn`
    ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET MGOON
    READ
    ● 22,15 SAY SPACE(50)
  ENDDO
  IF UPPER(MGOON)='N'
    ● 22,15 SAY 'Returning to AF Form 600 Main Menu'
    CLEAR
    RETURN
  ENDIF
ENDIF

LOOP
ENDIF

```

```

MCORRECT = ' '

DO WHILE .NOT. MCORRECT#`YyNn`
  ● 21,15 SAY 'Are you sure that you want to delete this record?'
  ● 21,65 SAY '(Y/N)' GET MCORRECT
  ● 22,15 SAY SPACE(50)
  READ
ENDDO

IF UPPER(MCORRECT)='N'
  ● 21,15 SAY 'This record will not be deleted.'
  MGOON = ' '

  DO WHILE .NOT. MGOON#`YyNn`
    ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET MGOON
    READ
    ● 22,15 SAY SPACE(50)
  ENDDO
ENDIF

```

```

        ENDDO

        IF UPPER(MGOON)='N'
            @22,15 SAY 'Returning to AF Form 600 Main Menu'
            CLEAR
            RETURN
        ENDIF
    ENDDO
    ENDIF

    DELETE ALL FOR CONTROL_NR = MCONTROL
    PACK

    * Check for another delete
    MANOTHER = ' '
    DO WHILE .NOT. MANOTHER='YyNn'
        @21,15 SAY SPACE(60)
        @21,15 SAY 'This record has been deleted.'
        @22,15 SAY 'Would you like to delete another record? (Y/N)';
        GET MANOTHER
        READ
        @ 22,15 SAY SPACE(5)
    ENDDO

    IF UPPER (MANOTHER)='N'
        @22,15 SAY 'Returning to AF Form 600 Main Menu'
        CLEAR
        RETURN
    ENDIF
    ENDDO
ENDDO

* EOF: 600DEL.PRG

*****

* Program.: 600RPT.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Create Reports from the AF Form 600 Control Log Equipment
*            Control Register
*            Called from AFFM600.PRG

USE AFFM600

DO NORECORD

DO WHILE .T.
    TODAY=DATE()
    CLEAR
    @ 1,8 TO 3,73
    @ 2,10 SAY 'A I R   F O R C E   F O R M   6 0 0   R E P O R T S '
    @ 2,64 SAY ' M E N U '
    @ 4,1 TO 21,77 DOUBLE

```

```

● 5.25 SAY 'DATE' TIME'
● 6.23 SAY TODAY
● 6.39 SAY TIME()
● 8.20 SAY '[A] All Records'
● 10.20 SAY '[B] Active Records Only'
● 12.20 SAY '[C] Records Received As Of A Particular Date'
● 14.20 SAY '[D] By Desk Number'
● 16.20 SAY '[E] By Organization and Shop Code'
● 18.20 SAY '[H] Help - How To Use The Reports System'
● 20.20 SAY '[Q] Quit'
● 23.8 SAY '[Enter Selection (A - E, H for help, or Q to quit) : :]'

```

```

I=0
DO WHILE I=0
  I=INKEY()
  ● 6.39 SAY TIME()
  ● 23.60 SAY ''

  IF UPPER(CHR(I))# 'ABCDEHQ'
    EXIT
  ENDIF

```

```

I=0
ENDDO

```

```

● 23.60 SAY UPPER(CHR(I))

```

```

* Input Printer/Screen Request
J = 251

```

```

DO CASE

```

```

CASE CHR(I) # 'Qq'
SAVE TO EMIS.MEM
CLEAR ALL
CLEAR
CLOSE DATABASES
RETURN

```

```

CASE CHR(I) # 'Aa'
● 8.18 SAY CHR(J)
DO PAUSE
DO 600RPTA

```

```

CASE CHR(I) # 'Bb'
● 10.18 SAY CHR(J)
DO PAUSE
DO 600RPTB

```

```

CASE CHR(I) # 'Cc'
● 12.18 SAY CHR(J)
DO PAUSE
DO 600RPTC

```

```

CASE CHR(I) # 'Dd'

```

```
@14,18 SAY CHR(J)
DO PAUSE
DO @00RPTD
```

```
CASE CHR(I) # 'Ee'
@16,18 SAY CHR(J)
DO PAUSE
DO @00RPTE
```

```
CASE CHR(I) # 'Hh'
@18,18 SAY CHR(J)
DO @00RPTH
```

ENDCASE

ENDDO

\* EOF: @00RPT.PRG

\*\*\*\*\*

```
* Program.: @00RPTA.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes...: Create a report containing all records in the Air Force
*           Form 600 Equipment Control Register
*           Called from @00RPT.PRG
```

USE AFFM600

PRINTER = ' '

```
DO WHILE .T.
  CLEAR
```

TEXT

This report will provide a list of all of the records in the Air Force Form 600 file.

Since the computer screen is only 80 columns wide, a report sent to the screen will not include the following data elements:

```
    Custodian Request Number
    Type of Action
    Date Forwarded
    Forwarded To
    Date Returned
```

If you need to see these data elements, you should send the report to a 132 column printer.

ENDTEXT

```
DO WHILE .NOT. PRINTER# 'PpSsQq'
```

```
● 22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';  
GET PRINTER  
READ  
ENDDO
```

```
CLEAR
```

```
IF UPPER(PRINTER)='Q'  
  SAVE TO EMIS.MEM  
  CLEAR ALL  
  CLEAR  
  CLOSE DATABASES  
  RETURN  
ENDIF
```

```
IF UPPER(PRINTER)='S'
```

```
  TEXT
```

Most reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

    <CONTROL S>

To START the report scrolling again type

    <RETURN>

```
  ENDTEXT
```

```
  WAIT  
  CLEAR  
  REPORT FORM 600RPTSA.FRM TO SCREEN  
  WAIT  
ENDIF
```

```
IF UPPER(PRINTER)='P'  
  CLEAR  
  WAIT 'Ready printer and press <RETURN>'  
  REPORT FORM 600RPTPA.FRM TO PRINT  
ENDIF
```

```
CLEAR
```

```
RETURN
```

ENDDO

\* EOF: 600RPTA.PRG

\*\*\*\*\*

\* Program.: 600RPTB.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes...: Create a report of all active records in the Air Force  
\* Form 600 Equipment Control Register  
\* Called from 600RPT.PRG

USE AFFM600

PRINTER = ' '

DO WHILE .T.

SET FILTER TO RTN\_DT = 0 .OR. COMPL\_ACT = ' '

GO TOP

CLEAR

TEXT

This report will provide a list of all of the records in the Air Force Form 600 file which have a return date of 0 or a blank in the completion action field.

Since the computer screen is only 80 columns wide, a report sent to the screen will not include the following data elements:

Custodian Request Number  
Type of Action  
Date Forwarded  
Forwarded To  
Date Returned

If you need to see these data elements, you should send the report to a 132 column printer.

ENDTEXT

DO WHILE .NOT. PRINTER# 'PpSsQq'

@22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';

GET PRINTER

READ

ENDDO

CLEAR

IF UPPER(PRINTER) = 'Q'

SAVE TO 600.MEM

```
CLEAR ALL
CLEAR
CLOSE DATABASES
RETURN
ENDIF
```

```
IF UPPER(PRINTER)='S'
```

```
TEXT
```

Most reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

```
ENDTEXT
```

```
WAIT
CLEAR
REPORT FORM 600RPTSB.FRM TO SCREEN
WAIT
ENDIF
```

```
IF UPPER(PRINTER)='P'
CLEAR
WAIT 'Ready printer and press <RETURN>'
REPORT FORM 600RPTPB.FRM TO PRINT
ENDIF
```

```
CLEAR
```

```
RETURN
```

```
ENDDO
```

```
* EOF: 600RPTB.PRG
```

```
*****
```

```
* Program.: 600RPTC.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
```

```

* Notes....: Create a report of records in the Air Force Form 600
*             Equipment Control Register received in the EMS between
*             user specified beginning and ending dates
*             Called from 600RPT.PRG

```

USE AFFM600

DO WHILE .T.

```

* Input Printer/Screen Request
J = 251
@ 13,18 SAY CHR(J)
PRINTER = ' '
CLEAR

```

TEXT

This report will provide a list of all of the records in the Air Force Form 600 file which were received on or after the beginning date you specify and on or before the ending date you specify.

ENDTEXT

```

* Initialize Memory Variables
STORE 0000 TO MRCVDB
STORE 0000 TO MRCVDE
STORE 00000 TO MCONTROLE
STORE 00000 TO MCONTROLE

```

```

* Input Report Dates
@ 20,15 SAY 'Enter Beginning Julian Date Of Report';
GET MRCVDB PICTURE '9999'
@ 22,15 SAY 'Enter Ending Julian Date of Report';
GET MRCVDE PICTURE '9999'
READ

```

```

SET FILTER TO RCVD_DT = MRCVDB
GO TOP
MCONTROLE = CONTROL_NR

```

```

SET FILTER TO RCVD_DT > MRCVDE
GO TOP
MCONTROLE = CONTROL_NR

```

```

SET FILTER TO RCVD_DT >= MRCVDB .AND. RCVD_DT <= MRCVDE
GO TOP
CLEAR

```

TEXT

Since the computer screen is only 80 columns wide, a report sent

to the screen will not include the following data elements:

Custodian Request Number  
Type of Action  
Date Forwarded  
Forwarded To  
Date Returned

If you need to see these data elements, you should send the report to a 132 column printer.

ENDTEXT

```
DO WHILE .NOT. PRINTER='PpSsQq'  
  @22,15 SAY "Send Output To Printer or Screen (P/S, or Q to quit)?";  
  GET PRINTER  
  READ  
ENDDO
```

CLEAR

```
IF UPPER(PRINTER)='Q'  
  SAVE TO EMIS.MEM  
  CLEAR ALL  
  CLEAR  
  CLOSE DATABASES  
  RETURN  
ENDIF
```

```
IF UPPER(PRINTER)='S'
```

TEXT

Most reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

ENDTEXT

WAIT  
CLEAR

```
REPORT FORM 600RPTSC.FRM TO SCREEN
WAIT
ENDIF
```

```
IF UPPER(PRINTER)='P'
CLEAR
WAIT 'Ready printer and press <RETURN>'
REPORT FORM 600RPTPC.FRM TO PRINT
ENDIF
```

```
CLEAR
RETURN
```

```
ENDDO
```

```
* EOF: 600RPTC.PRG
```

```
*****
```

```
* Program.: 600RPTD.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Create a report of records in the Air Force Form 600
*             Equipment Control Register managed by a user specified
*             equipment technician
*             Called from 600RPT.PRG
```

```
USE AFFM600
```

```
DO WHILE .T.
* Input Printer/Screen Request
J = 251
@ 15,18 SAY CHR(J)
PRINTER = ' '
CLEAR
```

```
* Initialize Memory Variables
STORE SPACE(1) TO MTO
```

```
TEXT
```

This report will provide a list of records in the Air Force Form 600 file by desk number of the technician assigned to process the request.

```
ENDTEXT
```

```
* Input Desk Number
@ 20,15 SAY 'Enter Desk Number ' GET MTO PICTURE 'N'
READ
SET FILTER TO FWD_TO = MTO
```

GO TOP  
CLEAR

TEXT

Since the computer screen is only 80 columns wide, a report sent to the screen will not include the following data elements:

Custodian Request Number  
Type of Action  
Date Forwarded  
Forwarded To  
Date Returned

If you need to see these data elements, you should send the report to a 132 column printer.

ENDTEXT

DO WHILE .NOT. PRINTER# 'PpSsQq'  
 @22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';  
 GET PRINTER  
 READ  
ENDDO

CLEAR

IF UPPER(PRINTER) = 'Q'  
 SAVE TO 000.MEM  
 CLEAR ALL  
 CLEAR  
 CLOSE DATABASES  
 RETURN  
ENDIF

IF UPPER(PRINTER) = 'S'

TEXT

Most reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

```

ENDTEXT

WAIT
CLEAR
REPORT FORM 600RPTSD.FRM TO SCREEN
WAIT
ENDIF

IF UPPER(PRINTER)='P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM 600RPTD.FRM TO PRINT
ENDIF

CLEAR

RETURN

ENDDO

* EOF: 600RPTD.PRG

*****

* Program.: 600RPTE.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Create a report of records in the Air Force 600
*             Equipment Control Register submitted by a user specified
*             Organization and Shop Code
*             Called from 600RPT.PRG

USE AFFM600

DO WHILE .T.

  * Input Printer/Screen Request
  J = 251
  @ 13,18 SAY CHR(J)
  PRINTER = ' '
  CLEAR

  TEXT

```

This report will provide a list of all of the records in the Air Force Form 600 file which were submitted by the organization and shop code you specify.

ENDTEXT

\* Initialize Memory Variable  
STORE SPACE(5) TO MORG

\* Input Organization/Shop Code  
@ 20,15 SAY "Enter desired Organization and Shop Code";  
GET MORG PICTURE "999AA"  
READ  
SET FILTER TO ORG\_SHOP = MORG  
GO TOP  
CLEAR

TEXT

Since the computer screen is only 80 columns wide, a report sent to the screen will not include the following data elements:

Custodian Request Number  
Type of Action  
Date Forwarded  
Forwarded To  
Date Returned

If you need to see these data elements, you should send the report to a 132 column printer.

ENDTEXT

DO WHILE .NOT. PRINTER# "PpSsQq"  
@22,15 SAY "Send Output To Printer or Screen (P/S, or Q to quit)?";  
GET PRINTER  
READ  
ENDDO

CLEAR

IF UPPER(PRINTER) = "Q"  
SAVE TO EMIS.MEM  
CLEAR ALL  
CLEAR  
CLOSE DATABASES  
RETURN  
ENDIF

IF UPPER(PRINTER) = "S"

TEXT

Most reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

ENDTEXT

WAIT

CLEAR

REPORT FORM 600RPTSE.FRM TO SCREEN

WAIT

ENDIF

IF UPPER(PRINTER)='P'

CLEAR

WAIT 'Ready printer and press <RETURN>'

REPORT FORM 600RPTPE.FRM TO PRINT

ENDIF

CLEAR

RETURN

ENDDO

\* EOF: 600RPTE.PRG

\*\*\*\*\*

\* Program.: 600RPTH.PRG

\* Author...: Capt Jeff Bailey

\* Last Revision: 9 August 1988

\* Notes....: HELP for the AF Form 600 Equipment Control Register Reports

\*           Module of the Equipment Management Information System

\*           Called From 600RPT.PRG

CLEAR

TEXT

Welcome to the Air Force Form 600 reports module of the Equipment Management Information System. This module will provide you with information needed to manage the processing of equipment requests logged in on the AF Form 600 Control Log.

Currently, this module provides the following reports:

```
*****
*
*           All Records In The Log           *
*
*           Active Requests Only             *
*
*   Requests Received By A Particular Date  *
*
*   Requests Managed By A Particular Technician *
*
*           Requests By Organization/Shop Code *
*
*****
```

The requirement for the Air Force Form 600 Log is outlined in AFM 67-1, Vol II, Part 2, Ch 22, Para 25b and Atch B-4.

ENDTEXT

WAIT SPACE(11) + 'Press any key to return to the Air Force ';  
'Form 600 Reports Menu.'

CLEAR  
RETURN

\* EOF: 600RPTH.PRG

\*\*\*\*\*

```
* Program.: 600HLP.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: HELP for the AF Form 600 Equipment Control Register Module
*            of the Equipment Management Information System
*            Called From 600.PRG
```

CLEAR

TEXT

Welcome to the Air Force Form 600 module of the Equipment Management Information System. This module will assist you in maintaining your AF Form 600 Control Log on the microcomputer. It allows you to add, update, and delete your entries to the log. It also can provide you with several reports for managing the processing of equipment requests.

Currently, this module supports the following tasks:

```
*****
*                                     *
*       Add Records To The Log       *
*                                     *
*       Update Records In The Log    *
*                                     *
*       Delete Records From The Log  *
*                                     *
*       Process Reports              *
*                                     *
*****
```

The requirement for the Air Force Form 600 Log is outlined in AFM 67-1, Vol II, Part 2, Ch 22, Para 25b and Atch B-4.

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

\*\*\*\*\*

From the Air Force Form 600 menu, press the following letters to begin working:

To ADD records to the Air Force Form 600 Log press [A]

To UPDATE records in the Air Force Form 600 Log press [B]

To DELETE records in the Air Force Form 600 Log press [C]

To run a REPORT on information in the AF Form 600 Log press [D]

To QUIT using the system press [Q]

\*\*\*\*\*

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

The data elements used in the Air Force Form 600 Control Log are listed below. The template can be interpreted as follows: A '9' means a number is required, an 'A' means a letter is required, and

an 'X' means either a number or a letter is allowed.

Common Name	Width	Template
Equipment Code	1	A
Organization/Shop Code	5	999AA
Custodian Request Number	8	99999999
In-Use Document Number	4	9999
NSN or Part Number	15	9999XXXXXXXXXAA
Action Requested	3	AAA
Nomenclature	20	XXXXXXXXXXXXXXXXXXXX
Julian Date Received	4	9999
Julian Date Forwarded	4	9999
Forwarded To	1	X
Julian Date Returned	4	9999
Completion Action	10	XXXXXXXXXX

In addition, each record input to the log is assigned a five-digit control number by the system.

ENDTEXT

WAIT SPACE(11) + 'Press any key to return to the Air Force ';  
'Form 600 menu.'

CLEAR

RETURN

\* EOF: 600HLP.PRG

\*\*\*\*\*

\* Program.: TA.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes....: Perform Table of Allowance Review List operations  
\*            Called from EMIS.PRG

USE TA

DO WHILE .T.

  TODAY=DATE()

  CLEAR

  @ 1,7 TO 3,73

  @ 4,1 TO 20,77 DOUBLE

  @ 2,9 SAY 'T A B L E S   O F   A L L O W A N C E S   R E V I E W   '

  @ 2,66 SAY 'L I S T'

  @ 8,20 SAY '[A] Add Records To The List'

  @ 10,20 SAY '[B] Update Records Previously Logged In'

  @ 12,20 SAY '[C] Delete Records Previously Logged In'

  @ 14,20 SAY '[D] Reports'

  @ 16,20 SAY '[H] Help - How To Use This System'

  @ 18,20 SAY '[Q] Quit'

  @ 5,25 SAY 'DATE                    TIME'

  @ 6,23 SAY TODAY

```
● 6.39 SAY TIME()
● 22.8 SAY '[Enter Selection (A - D, H for help, or Q to quit) : :]'
```

```
I=0
DO WHILE I=0
  I=INKEY()
  ● 6.39 SAY TIME()
  ● 22.60 SAY ''
  IF UPPER(CHR(I))# 'ABCDHQ'
    EXIT
  ENDIF
  I=0
ENDDO
● 22.60 SAY UPPER(CHR(I))
```

```
DO CASE
```

```
  CASE CHR(I) # 'Qq'
    SAVE TO TA.MEM
    CLEAR ALL
    CLEAR
    CLOSE DATABASES
    RETURN
```

```
  CASE CHR(I) # 'Aa'
    CLEAR
    CLOSE ALL
    DO TAADD
```

```
  CASE CHR(I) # 'Bb'
    CLEAR
    CLOSE ALL
    DO TAEDT
```

```
  CASE CHR(I) # 'Cc'
    CLEAR
    CLOSE ALL
    DO TADEL
```

```
  CASE CHR(I) # 'Dd'
    CLEAR
    CLOSE ALL
    DO TARPT
```

```
  CASE CHR(I) # 'Hh'
    CLEAR
    CLOSE ALL
    DO TAHLP
```

```
ENDCASE
```

```
ENDDO
```

```
* EOF: TA.PRG
```

\*\*\*\*\*

\* Program.: TAADD.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes....: Add records to the Table of Allowance Review List  
\*            Called from TA.PRG

USE TA

DO WHILE .T.

GO BOTTOM

\* INITIALIZE MEMORY VARIABLES  
STORE 000 TO MTA\_NR  
STORE 0000 TO MTA\_DT  
STORE 0000 TO MTA\_RCVD  
STORE SPACE(1) TO MTA\_FWD\_TO  
STORE 0000 TO MTA\_FWD\_DT  
STORE 0000 TO MTA\_DUE  
STORE 0000 TO MTA\_RTN

\* DRAW INPUT SCREEN

CLEAR

DO WHILE .T.

TODAY=DATE()

CLEAR

● 1,9 TO 3,71  
● 6,0 TO 20,77 DOUBLE  
● 2,11 SAY 'T A B L E . O F   A L L O W A N C E   A D D '  
● 2,56 SAY 'R O U T I N E'  
● 7,15 SAY 'Table of Allowance: ' GET MTA\_NR PICTURE '999'  
● 9,15 SAY 'Julian Date of TA: ' GET MTA\_DT PICTURE '9999'  
● 11,15 SAY 'Julian Date Received: ' GET MTA\_RCVD PICTURE '9999'  
● 13,15 SAY 'Forwarded To: ' GET MTA\_FWD\_TO PICTURE 'X'  
● 15,15 SAY 'Julian Date Forwarded: ' GET MTA\_FWD\_DT PICTURE '9999'  
● 17,15 SAY 'Julian Date of Suspense: ' GET MTA\_DUE PICTURE '9999'  
● 19,15 SAY 'Julian Date Returned: ' GET MTA\_RTN PICTURE '9999'

READ

\* CHECK FOR CORRECT ENTRY

CORRECT=' '

DO WHILE .NOT. CORRECT# 'YyNn'

● 22,15 SAY 'Is This Correct? (Y/N)' GET CORRECT

READ

● 22,15

ENDDO

IF UPPER(CORRECT)='N'

GOON=' '

DO WHILE .NOT. GOON# 'YyNn'

```

● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
READ
● 22,15
ENDDO

```

```

IF UPPER(GOON)='N'
●22,15 SAY 'Returning to TA Review List Main Menu'
CLEAR
RETURN
ENDIF

```

```

ENDDO
ENDIF

```

```

APPEND BLANK
REPLACE TA_NR WITH MTA_NR
REPLACE TA_DT WITH MTA_DT
REPLACE TA_RCVD WITH MTA_RCVD
REPLACE TA_FWD_TO WITH MTA_FWD_TO
REPLACE TA_FWD_DT WITH MTA_FWD_DT
REPLACE TA_DUE WITH MTA_DUE
REPLACE TA_RTN WITH MTA_RTN

```

```

* CHECK FOR ANOTHER INPUT
ANOTHER=' '
DO WHILE .NOT. ANOTHER# 'YyNn'
●22,15 SAY 'Input Another TA? (Y/N)' GET ANOTHER
READ
● 22,15
ENDDO

```

```

IF UPPER (ANOTHER)='Y'
CLEAR
EXIT
ENDIF

```

```

IF UPPER (ANOTHER)='N'
●22,15 SAY 'Returning to TA Review List Main Menu'
CLEAR
RETURN
ENDIF

```

```

CLEAR
ENDDO
ENDDO

```

```

* EOF: TAADD.PRG

```

```

*****

```

```

* Program.: TAEDT.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Edit records in the Table of Allowance Review List
*           Called from TA.PRG

```

USE TA

DO MORECORD

DO WHILE .T.

\* INITIALIZE MEMORY VARIABLES

STORE 000 TO MTA\_NR  
STORE 0000 TO MTA\_DT  
STORE 0000 TO MTA\_RCVD  
STORE SPACE(1) TO MTA\_FWD\_TO  
STORE 0000 TO MTA\_FWD\_DT  
STORE 0000 TO MTA\_DUE  
STORE 0000 TO MTA\_RTN

DO WHILE .T.

\* DRAW INPUT SCREEN  
CLEAR

DO WHILE .T.

TODAY=DATE()  
CLEAR

● 1,9 TO 3,71  
● 6,0 TO 20,77 DOUBLE  
● 2,11 SAY 'T A B L E O F A L L O W A N C E E D I T'  
● 2,59 SAY 'R O U T I N E'  
● 7,15 SAY 'Table of Allowance: '  
● 9,15 SAY 'Julian Date of TA: '  
● 11,15 SAY 'Julian Date Received: '  
● 13,15 SAY 'Forwarded To: '  
● 15,15 SAY 'Julian Date Forwarded: '  
● 17,15 SAY 'Julian Date of Suspense: '  
● 19,15 SAY 'Julian Date Returned: '

\* Input Table of Allowance Number

● 22,15 SAY 'Enter TA Number' GET MTA\_NR PICTURE '999'  
READ

\* Search for requested TA number

LOCATE FOR TA\_NR = MTA\_NR

IF .NOT. FOUND()

\* TA NUMBER IS NOT IN THE LOG

● 22,15

● 22,15 SAY 'TA Number' GET MTA\_NR PICTURE '999'

● 22,30 SAY 'cannot be found.'

CLEAR GETS

GOON = ' '

DO WHILE .NOT. GOON# 'YyNn'

● 23,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

ENDDO

IF UPPER(GOON)='N'

●23,15 SAY 'Returning to TA Review Main Menu'

CLEAR

RETURN

ENDIF

CLEAR

LOOP

ENDIF

\* If record is located, display data

● 1,9 TO 3,71

● 6,0 TO 20,77 DOUBLE

● 2,11 SAY 'T A B L E O F A L L O W A N C E E D I T '

● 2,59 SAY 'R O U T I N E'

● 7,15 SAY 'Table of Allowance: ' GET TA\_NR PICTURE '999'

● 9,15 SAY 'Julian Date of TA: ' GET TA\_DT PICTURE '9999'

● 11,15 SAY 'Julian Date Received: ' GET TA\_RCVD PICTURE '9999'

● 13,15 SAY 'Forwarded To: ' GET TA\_FWD\_TO PICTURE 'X'

● 15,15 SAY 'Julian Date Forwarded: ' GET TA\_FWD\_DT PICTURE '9999'

● 17,15 SAY 'Julian Date of Suspense: ' GET TA\_DUE PICTURE '9999'

● 19,15 SAY 'Julian Date Returned: ' GET TA\_RTN PICTURE '9999'

CLEAR GETS

CORRECT = ' '

DO WHILE NOT. CORRECT# 'YyNn'

● 22,15

● 22,15 SAY 'Is this the correct TA? (Y/N)' GET CORRECT

READ

ENDDO

IF UPPER(CORRECT)='N'

● 22,15

GOON = ' '

DO WHILE .NOT. GOON# 'YyNn'

● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

● 22,15

ENDDO

IF UPPER(GOON)='N'

●22,15 SAY 'Returning to TA Review Main Menu'

CLEAR

RETURN

ENDIF

LOOP

ENDIF

● 1,9 TO 3,71

● 6,0 TO 20,77 DOUBLE

```

● 2,11 SAY 'TABLE OF ALLOWANCE EDIT'
● 2,59 SAY 'ROUTINE'
● 7,13 SAY 'Table of Allowance: ' GET TA_NR PICTURE '999'
● 9,15 SAY 'Julian Date of TA: ' GET TA_DT PICTURE '9999'
● 11,15 SAY 'Julian Date Received: ' GET TA_RCVD PICTURE '9999'
● 13,15 SAY 'Forwarded To: ' GET TA_FWD_TO PICTURE 'X'
● 15,15 SAY 'Julian Date Forwarded: ' GET TA_FWD_DT PICTURE '9999'
● 17,15 SAY 'Julian Date of Suspense: ' GET TA_DUE PICTURE '9999'
● 19,15 SAY 'Julian Date Returned: ' GET TA_RTN PICTURE '9999'

```

```

●22,15 SAY 'Go ahead and make the necessary changes.'

```

```

READ

```

```

●22,15

```

```

CORRECT = ' '

```

```

* Check for correct entry

```

```

DO WHILE .NOT. CORRECT# 'YyNn'

```

```

    ● 22,15 SAY 'Is This Correct? (Y/N)' GET CORRECT

```

```

    READ

```

```

    ● 22,15

```

```

ENDDO

```

```

IF UPPER(CORRECT) = 'N'

```

```

    GOON = ' '

```

```

DO WHILE .NOT. GOON# 'YyNn'

```

```

    ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

```

```

    READ

```

```

    ● 22,15

```

```

ENDDO

```

```

IF UPPER(GOON) = 'N'

```

```

    ●22,15 SAY 'Returning to TA Review Main Menu'

```

```

    CLEAR

```

```

    RETURN

```

```

ENDIF

```

```

ENDDO

```

```

ENDIF

```

```

MTA_NR = TA_NR

```

```

MTA_DT = TA_DT

```

```

MTA_RCVD = TA_RCVD

```

```

MTA_FWD_TO = TA_FWD_TO

```

```

MTA_FWD_DT = TA_FWD_DT

```

```

MTA_DUE = TA_DUE

```

```

MTA_RTN = TA_RTN

```

```

REPLACE TA_NR WITH MTA_NR

```

```

REPLACE TA_DT WITH MTA_DT

```

```

REPLACE TA_RCVD WITH MTA_RCVD

```

```

REPLACE TA_FWD_TO WITH MTA_FWD_TO

```

```

REPLACE TA_FWD_DT WITH MTA_FWD_DT

```

```

REPLACE TA_DUE WITH MTA_DUE

```

```

REPLACE TA_RTN WITH MTA_RTN

```

```

* Check for another edit
ANOTHER = ' '

DO WHILE .NOT. ANOTHER#`YyNn`
  @22,15 SAY `Update Another Record? (Y/N)` GET ANOTHER
  READ
  @ 22,15
ENDDO

IF UPPER (ANOTHER)='N'
  @22,15 SAY `Returning to TA Review Main Menu`
  CLEAR
  RETURN
ENDIF

ENDDO
ENDDO

* EOF: TAEDT.PRG

*****

* Program.: TADEL.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes...: Delete records from the Tables of Allowances Review List
*           Called from TA.PRG

USE TA

DO WHILE .T.

DO NORECORD

DO WHILE .T.

  * INITIALIZE MEMORY VARIABLES

  STORE 000 TO MTA_NR
  STORE 0000 TO MTA_DT
  STORE 0000 TO MTA_RCVD
  STORE SPACE(1) TO MTA_FWD_TO
  STORE 0000 TO MTA_FWD_DT
  STORE 0000 TO MTA_DUE
  STORE 0000 TO MTA_RTN

  DO WHILE .T.

    * DRAW SCREEN
    CLEAR

DO WHILE .T.

  TODAY=DATE()
  CLEAR

```

```

● 1,4 TO 3,76
● 6,0 TO 20,77 DOUBLE
● 2,6 SAY 'T A B L E S   O F   A L L O W A N C E S   D E L E T E   '
● 2,62 SAY 'R O U T I N E'
● 7,15 SAY 'Table of Allowance: '
● 9,15 SAY 'Julian Date of TA: '
● 11,15 SAY 'Julian Date Received: '
● 13,15 SAY 'Forwarded To: '
● 15,15 SAY 'Julian Date Forwarded: '
● 17,15 SAY 'Julian Date of Suspense: '
● 19,15 SAY 'Julian Date Returned: '

* Input Table of Allowance Number
  ● 22,15 SAY 'Enter TA Number' GET MTA_NR PICTURE '999'
  READ

* Search for requested TA number
  LOCATE FOR TA_NR = MTA_NR

  IF .NOT. FOUND()
    * TA NUMBER IS NOT IN THE LOG
    ● 22,15
    ● 22,15 SAY 'TA Number' GET MTA_NR PICTURE '999'
    ● 22,30 SAY 'cannot be found.'
    CLEAR GETS
    GOON = ' '

    DO WHILE .NOT. GOON# 'YyNn'
      ● 23,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
      READ
    ENDDO
    IF UPPER(GOON) = 'N'
      ● 23,15 SAY 'Returning to TA Review Main Menu'
      CLEAR
      RETURN
    ENDIF
    CLEAR
    LOOP
  ENDIF

* If record is located, display data

● 1,4 TO 3,76
● 6,0 TO 20,77 DOUBLE
● 2,6 SAY 'T A B L E S   O F   A L L O W A N C E S   D E L E T E   '
● 2,62 SAY 'R O U T I N E'
● 7,15 SAY 'Table of Allowance: ' GET TA_NR PICTURE '999'
● 9,15 SAY 'Julian Date of TA: ' GET TA_DT PICTURE '9999'
● 11,15 SAY 'Julian Date Received: ' GET TA_RCVD PICTURE '9999'
● 13,15 SAY 'Forwarded To: ' GET TA_FWD_TO PICTURE 'X'
● 15,15 SAY 'Julian Date Forwarded: ' GET TA_FWD_DT PICTURE '9999'
● 17,15 SAY 'Julian Date of Suspense: ' GET TA_DUE PICTURE '9999'
● 19,15 SAY 'Julian Date Returned: ' GET TA_RTN PICTURE '9999'
  CLEAR GETS

```

```

CORRECT = ' '
DO WHILE .NOT. CORRECT# 'YyNn'
  ● 22,15
  ● 22,15 SAY 'Is this the correct record? (Y/N)' GET CORRECT
  READ
ENDDO

IF UPPER(CORRECT) = 'N'
  ● 22,15
  GOON = ' '

  DO WHILE .NOT. GOON# 'YyNn'
    ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
    READ
    ● 22,15
  ENDDO

  IF UPPER(GOON) = 'N'
    ● 22,15 SAY 'Returning to TA Review List Main Menu'
    CLEAR
    RETURN
  ENDIF

  LOOP
ENDIF

MCORRECT = ' '

DO WHILE .NOT. MCORRECT# 'YyNn'
  ● 22,15
  ● 22,15 SAY 'Are you sure that you want to delete this record?';
  '(Y/N)' GET MCORRECT
  READ
ENDDO

IF UPPER(MCORRECT) = 'N'
  ● 23,15 SAY 'This record will not be deleted.'
  DO PAUSE
  ● 22,15
  ● 23,15
  MGOON = ' '

  DO WHILE .NOT. MGOON# 'YyNn'
    ● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET MGOON
    READ
    ● 22,15
  ENDDO

  IF UPPER(MGOON) = 'N'
    ● 22,15 SAY 'Returning to TA Review List Main Menu'
    CLEAR
    RETURN
  ENDIF
ENDIF
ENDDO

```

ENDIF

DELETE ALL FOR TA\_NR = MTA\_NR  
PACK

\* Check for another delete

MANOTHER = ' '

DO WHILE .NOT. MANOTHER# 'YyNn'

    @22,15

    @22,15 SAY 'This record has been deleted.'

    @23,15 SAY 'Would you like to delete another record? (Y/N)';

    GET MANOTHER

    DO PAUSE

    READ

    @22,15

    @23,15

ENDDO

IF UPPER (MANOTHER)='N'

    @22,15 SAY 'Returning To TA Review List Main Menu'

    CLEAR

    RETURN

ENDIF

ENDDO

ENDDO

\* EOF: TADEL.PRG

\*\*\*\*\*

\* Program.: TARPT.PRG

\* Author...: Capt Jeff Bailey

\* Last Revision: 9 August 1988

\* Notes....: Create Reports from the Table of Allowance Review List

\*           Called from TA.PRG

USE TA

DO NORECORD

DO WHILE .T.

TODAY=DATE()

CLEAR

● 1,6 TO 3,76

● 2,8 SAY 'T A B L E   O F   A L L O W A N C E   R E P O R T S   '

● 2,62 SAY 'R O U T I N E'

● 4,1 TO 21,77 DOUBLE

● 5,25 SAY 'DATE                    TIME'

● 6,23 SAY TODAY

● 6,39 SAY TIME()

● 8,20 SAY '[A] All Tables of Allowances'

● 10,20 SAY '[B] Tables of Allowances Under Review'

● 12,20 SAY '[C] Tables of Allowances Under Review More Than 20 Days'

```

● 14,20 SAY '[D] Tables of Allowances By TA Number'
● 16,20 SAY '[H] Help - How To Use The Reports System'
● 18,20 SAY '[Q] Quit'
● 23,8 SAY '[Enter Selection (A - D, H for help, or Q to quit) : :]'

```

```

I=0
DO WHILE I=0
  I=INKEY()
  ● 6,39 SAY TIME()
  ● 23,60 SAY ''
  IF UPPER(CHR(I))# 'ABCDHQ'
    EXIT
  ENDIF
  I=0
ENDDO

● 23,60 SAY UPPER(CHR(I))

* INPUT PRINTER/SCREEN REQUEST
J = 251

DO CASE

CASE CHR(I) # 'Qq'
  SAVE TO TA.MEM
  CLEAR ALL
  CLEAR
  CLOSE DATABASES
  RETURN

CASE CHR(I) # 'Aa'
  ● 8,18 SAY CHR(J)
  DO PAUSE
  DO TARPTA

CASE CHR(I) # 'Bb'
  ●10,18 SAY CHR(J)
  DO PAUSE
  DO TARPTB

CASE CHR(I) # 'Cc'
  ●12,18 SAY CHR(J)
  DO PAUSE
  DO TARPTC

CASE CHR(I) # 'Dd'
  ●14,18 SAY CHR(J)
  DO PAUSE
  DO TARPTD

CASE CHR(I) # 'Hh'
  ●16,18 SAY CHR(J)
  DO TARPTH

ENDCASE

```

ENDDO

\* EOF: TARPT.PRG

\*\*\*\*\*

\* Program.: TARPTA.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes...: Create a report containing all Tables of Allowances in the  
\*           TA Review List  
\*           Called from TARPT.PRG

USE TA

DO WHILE .T.

\* Input Printer/Screen Request  
J = 251  
@ 8,18 SAY CHR(J)  
PRINTER = ' '  
CLEAR

TEXT

This report will provide a list of all of the Tables of Allowances  
in the TA Review List.

ENDTEXT

DO WHILE .NOT. PRINTER# 'PpSsQq'  
@22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';  
GET PRINTER  
READ  
ENDDO

CLEAR

IF UPPER(PRINTER)='Q'  
SAVE TO TA.MEM  
CLEAR ALL  
CLEAR  
CLOSE DATABASES  
RETURN  
ENDIF

IF UPPER(PRINTER)='S'

TEXT

Most reports are longer than one screen. Therefore, they will  
scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

ENDTEXT

WAIT  
CLEAR  
REPORT FORM TARPTA.FRM TO SCREEN  
WAIT  
ENDIF

IF UPPER(PRINTER)='P'  
CLEAR  
WAIT 'Ready printer and press <RETURN>'  
REPORT FORM TARPTA.FRM TO PRINT  
ENDIF

CLEAR

RETURN

ENDDO

\* EOF: TARPTA.PRG

\*\*\*\*\*

\* Program.: TARPTB.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes....: Create a report of all Tables of Allowances in the TA List  
\* currently under review  
\* Called from TARPT.PRG

USE TA

PRINTER = ' '

DO WHILE .T.  
SET FILTER TO TA\_RTN = 0  
GO TOP  
CLEAR

TEXT

This report will provide a list of all of the Tables of Allowances  
in the TA Review List which have a blank in the Date Returned field.

ENDTEXT

```
DO WHILE .NOT. PRINTER#`PpSsQq`  
  @22,15 SAY `Send Output To Printer or Screen (P/S, or Q to quit)?`;  
  GET PRINTER  
  READ  
ENDDO
```

CLEAR

```
IF UPPER(PRINTER)='Q'  
  SAVE TO TA.MEM  
  CLEAR ALL  
  CLEAR  
  CLOSE DATABASES  
  RETURN  
ENDIF
```

```
IF UPPER(PRINTER)='S'
```

TEXT

Most reports are longer than one screen. Therefore, they will  
scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

ENDTEXT

```
WAIT  
CLEAR  
REPORT FORM TARPTB.FRM TO SCREEN  
WAIT
```

```

ENDIF

IF UPPER(PRINTER)='P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM TARPTB.FRM TO PRINT
ENDIF

CLEAR

RETURN

ENDDO

* EOF: TARPTB.PRG

*****

* Program.: TARPTC.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes...: Create a report of Tables of Allowances in the TA Review
*           List which have been under review more than 20 days.
*           Called from TARPT.PRG

USE TA

DO WHILE .T.
  * Input Printer/Screen Request
  J = 251
  @ 13,18 SAY CHR(J)
  PRINTER = ' '
  CLEAR

  TEXT

  This report will provide a list of all of the records in the
  Tables of Allowances Review List which are currently being reviewed
  and have been under review for more than 20 days.

  ENDTXT

  * Initialize Memory Variable
  STORE 0000 TO MDATE

  * Input Today's Date
  @ 20,15 SAY 'Enter Today's Julian Date' GET MDATE PICTURE '9999'
  READ

```

```
SET FILTER TO TA_RTN = 0 .AND. TA_FWD_DT + 20 < MDATE
GO TOP
```

```
DO WHILE .NOT. PRINTER#`PpSsQq`
  @22,15 SAY "Send Output To Printer or Screen (P/S, or Q to quit)?"
  GET PRINTER
  READ
ENDDO
```

```
CLEAR
```

```
IF UPPER(PRINTER)='Q'
  SAVE TO TA.MEM
  CLEAR ALL
  CLEAR
  CLOSE DATABASES
  RETURN
ENDIF
```

```
IF UPPER(PRINTER)='S'
```

```
  TEXT
```

Some reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

```
ENDTEXT
```

```
WAIT
CLEAR
REPORT FORM TARPTC.FRM TO SCREEN
WAIT
ENDIF
```

```
IF UPPER(PRINTER)='P'
  CLEAR
  WAIT "Ready printer and press <RETURN>"
  REPORT FORM TARPTC.FRM TO PRINT
ENDIF
```

CLEAR  
RETURN

ENDDO

\* EOF: TARPTC.PRG

\*\*\*\*\*

\* Program.: TARPTD.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes....: Create a report of showing Table of Allowances information  
\*           for a specific TA contained in the TA Review List  
\*           Called from TARPT.PRG

USE TA

DO WHILE .T.

  \* Input Printer/Screen Request  
  J = 251  
  @ 15,18 SAY CHR(J)  
  PRINTER = ' '  
  CLEAR

  \* Initialize Memory Variable  
  STORE 000 TO MTA\_NR

TEXT

This report will provide information on a user-specified Table of Allowances contained in the TA Review List.

ENDTEXT

  \* Input TA Number  
  @ 20,15 SAY 'Enter TA Number ' GET MTA\_NR PICTURE '999'  
  READ  
  SET FILTER TO TA\_NR = MTA\_NR  
  GO TOP

DO WHILE .NOT. PRINTER# 'PpSsQq'  
  @22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?':  
  GET PRINTER  
  READ  
ENDDO

CLEAR

```

IF UPPER(PRINTER)='Q'
  SAVE TO TA.MEM
  CLEAR ALL
  CLEAR
  CLOSE DATABASES
  RETURN
ENDIF

IF UPPER(PRINTER)='S'
  REPORT FORM TARPTD.FRM TO SCREEN
ENDIF

IF UPPER(PRINTER)='P'
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM TARPTD.FRM TO PRINT
ENDIF

WAIT

CLEAR

RETURN

ENDDO

* EOF: TARPTD.PRG

*****

* Program.: TARP TH.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: HELP for the Tables of Allowances Review List Reports
*            Module of the Equipment Management Information System
*            Called From TARPT.PRG

CLEAR

TEXT
Welcome to the Tables of Allowances Review List reports module of
the Equipment Management Information System. This module will provide
you with information needed to manage the TA review process.

```

Currently, this module provides the following reports:

```
*****
*
*      All Tables Of Allowances In The List      *
*
*      Tables Of Allowances Under Review          *
*
*      Tables Of Allowances Under Review For > 20 Days *
*
*      Table Of Allowances By TA Number          *
*
*****
```

The requirement to manage the Tables of Allowances review process is contained in AFM 67-1, Vol II, Part 2, Ch 22, Para 23.

ENDTEXT

WAIT SPACE(11) + 'Press any key to return to the Tables Of ';  
'Allowances Review Menu.'

CLEAR  
RETURN

\* EOF: TARPTH.PRG

\*\*\*\*\*

```
* Program.: TAHL.PRG
* Author..: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes...: HELP for the Tables of Allowances Review List Module
*           of the Equipment Management Information System
*           Called From TA.PRG
```

CLEAR

TEXT

Welcome to the Tables of Allowances Review List module of the Equipment Management Information System. This module will assist you in managing the TA review process. It allows you to add, update, and delete your entries to the list. It also can provide you with several reports for managing the TA reviews.

Currently, this module supports the following tasks:

```
*****
*
*   Add Tables of Allowances to the List   *
*
*   Update Tables of Allowances Information *
*
*   Delete Tables of Allowances from the List *
*
*               Process Reports             *
*
*****
```

The requirement to manage the Table of Allowances review process is contained in AFM 67-1, Vol II, Part 2, Ch 22, Para 23.

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

\*\*\*\*\*

From the Tables of Allowances Review List menu, press the following letters to begin working:

To ADD TAs to the Tables of Allowances Review List press [A]

To UPDATE TAs in the Tables of Allowances Review List press [B]

To DELETE TAs from the Tables of Allowances Review List press [C]

To run a REPORT on the Tables of Allowances Review List press [D]

To QUIT using the system press [Q]

\*\*\*\*\*

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

The data elements used in the Tables of Allowances Review List are listed below. The template can be interpreted as follows: A '9'

means a number is required, an 'A' means a letter is required, and an 'X' means either a number or a letter is allowed.

Common Name	Width	Template
Table of Allowance Number	3	999
Table of Allowance Date	4	9999
Date Received	4	9999
Forwarded To	1	X
Forwarding Date	4	9999
Due Date	4	9999
Date Returned	4	9999

ENDTEXT

WAIT SPACE(11) + 'Press any key to return to the Tables of '  
'Allowances Review List menu.'

CLEAR  
RETURN

\* EOF: TAHLP.PRG

\*\*\*\*\*

\* Program.: RES.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes....: Perform Configuration Data/Resume File Actions  
\*            Called from EMIS.PRG

USE RES

DO WHILE .T.

  TODAY=DATE()

  CLEAR

  @ 1,9 TO 3,72

  @ 2,11 SAY 'C O N F I G U R A T I O N   D A T A / R E S U M E   '

  @ 2,63 SAY ' F I L E '

  @ 4,1 TO 20,77 DOUBLE

  @ 5,25 SAY 'DATE                    TIME'

  @ 6,23 SAY TODAY

  @ 6,39 SAY TIME()

  @ 8,20 SAY '[A] Add An Organization Record'

  @ 10,20 SAY '[B] Update An Organization Record'

  @ 12,20 SAY '[C] Delete An Organization Record'

  @ 14,20 SAY '[D] Reports'

  @ 16,20 SAY '[H] Help - How To Use This System'

  @ 18,20 SAY '[Q] Quit'

  @ 22,8 SAY '[Enter Selection (A - D, H for help, or Q to quit) : :]'

  I=0

  DO WHILE I=0

    I=INKEY()

    @ 6,39 SAY TIME()

    @ 22,60 SAY ''

```

IF UPPER(CHR(I))# 'ABCDHQ'
  EXIT
ENDIF

I=0
ENDDO

* 22,60 SAY UPPER(CHR(I))

DO CASE

CASE CHR(I) # 'Qq'
SAVE TO RES.MEM
CLEAR ALL
CLEAR
CLOSE DATABASES
RETURN

CASE CHR(I) # 'Aa'
CLEAR
CLOSE ALL
DO RESADD

CASE CHR(I) # 'Bb'
CLEAR
CLOSE ALL
DO RESEDt

CASE CHR(I) # 'Cc'
CLEAR
CLOSE ALL
DO RESDEL

CASE CHR(I) # 'Dd'
CLEAR
CLOSE ALL
DO RESRPT

CASE CHR(I) # 'Hh'
CLEAR
CLOSE ALL
DO RESHLP

ENDCASE

ENDDO

* EOF: RES.PRG

*****

* Program.: RESADD.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988

```

\* Notes....: Add records to the Configuration Data/Resume File  
\*           Called from RES.PRG

USE RES

DO WHILE .T.

GO BOTTOM

\* Initialize Memory Variables

STORE 000 TO MABAG1

STORE 000 TO MABAG2

STORE 000 TO MABAG3

STORE 000 TO MABAG4

STORE 000 TO MABAG5

STORE 000 TO MABAG6

STORE 000 TO MABAG7

STORE 000 TO MTA1

STORE 000 TO MTA2

STORE 000 TO MTA3

STORE 000 TO MTA4

STORE 000 TO MTA5

STORE 000 TO MTA6

STORE 000 TO MTA7

STORE 000 TO MBBAG1

STORE 000 TO MBBAG2

STORE 000 TO MBBAG3

STORE 000 TO MBBAG4

STORE 000 TO MBBAG5

STORE 000 TO MBBAG6

STORE 000 TO MBBAG7

STORE 0000 TO MBLDG1

STORE 0000 TO MBLDG2

STORE 0000 TO MBLDG3

STORE 0000 TO MBLDG4

STORE 0000 TO MBLDG5

STORE 0000 TO MBLDG6

STORE 0000 TO MBLDG7

STORE 0000 TO MBLDG8

STORE 000 TO MCBAG1

STORE 000 TO MCBAG2

STORE 000 TO MCBAG3

STORE 000 TO MCBAG4

STORE 000 TO MCBAG5

STORE 000 TO MCBAG6

STORE 000 TO MCBAG7

STORE 000 TO MAUTH\_ENL

STORE SPACE(12) TO MOFFICE

STORE 000 TO MAUTH\_OFF

STORE SPACE(5) TO MORGSHP1

STORE SPACE(5) TO MORGSHP2

STORE SPACE(5) TO MORGSHP3

STORE SPACE(5) TO MORGSHP4

STORE SPACE(5) TO MORGSHP5

STORE SPACE(5) TO MORGSHP6

STORE SPACE(5) TO MORGSHP7

```

STORE SPACE(2) TO MGRADE
STORE 000000 TO MSQF
STORE 000 TO MUBAG1
STORE 000 TO MUBAG2
STORE 000 TO MUBAG3
STORE 000 TO MUBAG4
STORE 000 TO MUBAG5
STORE 000 TO MUBAG6
STORE 000 TO MUBAG7

```

```

* Draw Input Screen

```

```

CLEAR

```

```

DO WHILE .T.

```

```

    TODAY=DATE()

```

```

    CLEAR

```

```

    ● 1,9 TO 3,71

```

```

    ● 2,11 SAY 'C O N F I G U R A T I O N   D A T A   A D D   '

```

```

    ● 2,57 SAY 'R O U T I N E'

```

```

    ● 6,0 TO 20,77 DOUBLE

```

```

    ● 7,48 SAY 'Office Symbol: ' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'

```

```

    ● 8,10 SAY 'Senior Grade: ' GET MGRADE PICTURE '9A'

```

```

    ● 8,24 SAY 'Officers: ' GET MAUTH_OFF PICTURE '999'

```

```

    ● 8,43 SAY 'Enlisted: ' GET MAUT_ENL PICTURE '999'

```

```

    ● 9,20 SAY 'Authorized TA's: ' GET MTA1 PICTURE '999'

```

```

    ● 9,42 GET MTA2 PICTURE '999'

```

```

    ● 9,46 GET MTA3 PICTURE '999'

```

```

    ● 9,50 GET MTA4 PICTURE '999'

```

```

    ● 9,54 GET MTA5 PICTURE '999'

```

```

    ● 9,58 GET MTA6 PICTURE '999'

```

```

    ● 9,66 GET MTA7 PICTURE '999'

```

```

    ● 11,42 SAY 'Buildings: ' GET MBLDG1 PICTURE '9999'

```

```

    ● 11,59 GET MBLDG2 PICTURE '9999'

```

```

    ● 11,63 GET MBLDG3 PICTURE '9999'

```

```

    ● 11,67 GET MBLDG4 PICTURE '9999'

```

```

    ● 12,55 GET MBLDG5 PICTURE '9999'

```

```

    ● 12,59 GET MBLDG6 PICTURE '9999'

```

```

    ● 12,63 GET MBLDG7 PICTURE '9999'

```

```

    ● 12,67 GET MBLDG8 PICTURE '9999'

```

```

    ● 14,42 SAY 'Square Feet: ' GET MSQF PICTURE '999999'

```

```

    ● 15,42 SAY 'Mobility Taskings'

```

```

    ● 16,30 SAY 'Org/Shop A-Bag B-Bag U-Bag C-BAG'

```

```

    ● 17,40 GET MORGSHP1

```

```

    ● 17,50 GET MABAG1 PICTURE '999'

```

```

    ● 17,57 GET MBBAG1 PICTURE '999'

```

```

    ● 17,64 GET MUBAG1 PICTURE '999'

```

```

    ● 17,71 GET MCBAG1 PICTURE '999'

```

```

    ● 18,40 GET MORGSHP2

```

```

    ● 18,50 GET MABAG2 PICTURE '999'

```

```

    ● 18,57 GET MBBAG2 PICTURE '999'

```

```

    ● 18,64 GET MUBAG1 PICTURE '999'

```

```

    ● 18,71 GET MCBAG1 PICTURE '999'

```

```

    ● 19,40 GET MORGSHP3

```

```

    ● 19,50 GET MABAG3 PICTURE '999'

```

```

    ● 19,57 GET MBBAG3 PICTURE '999'

```

```

    ● 19,64 GET MUBAG3 PICTURE '999'

```

```

● 19,71 GET MCBAG3 PICTURE '999'
● 20,40 GET MORGSHP4
● 20,50 GET MABAG4 PICTURE '999'
● 20,57 GET MBBAG4 PICTURE '999'
● 20,64 GET MUBAG4 PICTURE '999'
● 20,71 GET MCBAG4 PICTURE '999'
● 21,40 GET MORGSHP5
● 21,50 GET MABAG5 PICTURE '999'
● 21,57 GET MBBAG5 PICTURE '999'
● 21,64 GET MUBAG4 PICTURE '999'
● 21,71 GET MCBAG4 PICTURE '999'
● 22,40 GET MORGSHP6
● 22,50 GET MABAG6 PICTURE '999'
● 22,57 GET MBBAG6 PICTURE '999'
● 22,64 GET MUBAG6 PICTURE '999'
● 22,71 GET MCBAG6 PICTURE '999'
● 23,40 GET MORGSHP7
● 23,50 GET MABAG7 PICTURE '999'
● 23,57 GET MBBAG7 PICTURE '999'
● 23,64 GET MUBAG7 PICTURE '999'
● 23,71 GET MCBAG7 PICTURE '999'

```

READ

\* Check For Correct Entry  
CORRECT=' '

DO WHILE .NOT. CORRECT='YyNn'

● 24,15 SAY 'Is This Correct? (Y/N)' GET CORRECT

READ

● 24,15

ENDDO

IF UPPER(CORRECT)='N'

GOON=' '

DO WHILE .NOT. GOON='YyNn'

● 24,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

● 24,15

ENDDO

IF UPPER(GOON)='N'

●24,15 SAY 'Returning to Configuration Data/Resume File Main Menu'

CLEAR

RETURN

ENDIF

ENDDO

ENDIF

APPEND BLANK

REPLACE ABAG1 WITH TO MABAG1

REPLACE ABAG2 WITH MABAG2

REPLACE ABAG3 WITH MABAG3

REPLACE ABAG4 WITH MABAG4  
 REPLACE ABAG5 WITH MABAG5  
 REPLACE ABAG6 WITH MABAG6  
 REPLACE ABAG7 WITH MABAG7  
 REPLACE TA1 WITH MTA1  
 REPLACE TA2 WITH MTA2  
 REPLACE TA3 WITH MTA3  
 REPLACE TA4 WITH MTA4  
 REPLACE TA5 WITH MTA5  
 REPLACE TA6 WITH MTA6  
 REPLACE TA7 WITH MTA7  
 REPLACE BBAG1 WITH MBBAG1  
 REPLACE BBAG2 WITH MBBAG2  
 REPLACE BBAG3 WITH MBBAG3  
 REPLACE BBAG4 WITH MBBAG4  
 REPLACE BBAG5 WITH MBBAG5  
 REPLACE BBAG6 WITH MBBAG6  
 REPLACE BBAG7 WITH MBBAG7  
 REPLACE BLDG1 WITH MBLDG1  
 REPLACE BLDG2 WITH MBLDG2  
 REPLACE BLDG3 WITH MBLDG3  
 REPLACE BLDG4 WITH MBLDG4  
 REPLACE BLDG5 WITH MBLDG5  
 REPLACE BLDG6 WITH MBLDG6  
 REPLACE BLDG7 WITH MBLDG7  
 REPLACE BLDG8 WITH MBLDG8  
 REPLACE CBAG1 WITH MCBAG1  
 REPLACE CBAG2 WITH MCBAG2  
 REPLACE CBAG3 WITH MCBAG3  
 REPLACE CBAG4 WITH MCBAG4  
 REPLACE CBAG5 WITH MCBAG5  
 REPLACE CBAG6 WITH MCBAG6  
 REPLACE CBAG7 WITH MCBAG7  
 REPLACE AUTH\_ENL WITH MAUTH\_ENL  
 REPLACE OFFICE WITH MOFFICE  
 REPLACE AUTH\_OFF WITH MAUTH\_OFF  
 REPLACE ORGSHP1 WITH MORGSHP1  
 REPLACE ORGSHP2 WITH MORGSHP2  
 REPLACE ORGSHP3 WITH MORGSHP3  
 REPLACE ORGSHP4 WITH MORGSHP4  
 REPLACE ORGSHP5 WITH MORGSHP5  
 REPLACE ORGSHP6 WITH MORGSHP6  
 REPLACE ORGSHP7 WITH MORGSHP7  
 REPLACE GRADE WITH MGRADE  
 REPLACE SQF WITH MSQF  
 REPLACE UBAG1 WITH MUBAG1  
 REPLACE UBAG2 WITH MUBAG2  
 REPLACE UBAG3 WITH MUBAG3  
 REPLACE UBAG4 WITH MUBAG4  
 REPLACE UBAG5 WITH MUBAG5  
 REPLACE UBAG6 WITH MUBAG6  
 REPLACE UBAG7 WITH MUBAG7

\* Check For Another Input  
 ANOTHER=

```

DO WHILE .NOT. ANOTHER$'YyNn'
  @24,15 SAY 'Input Another Record? (Y/N)' GET ANOTHER
  READ
  @ 24,15
ENDDO

IF UPPER (ANOTHER)='Y'
  CLEAR
  EXIT
ENDIF

IF UPPER (ANOTHER)='N'
  @24,15 SAY 'Returning to Configuration Data/Resume File Main Menu'
  CLEAR
  RETURN
ENDIF

CLEAR

ENDDO

ENDDO

```

\* EOF: RESADD.PRG

\*\*\*\*\*

```

* Program.: RESEDT.PRG
* Author..: Capt Jeff Bailey
* Last Revision: 30 August 1988
* Notes...: Edit records in the Configuration Data/Resume File
*           Called from RES.PRG

```

USE RES

DO NORECORD

DO WHILE .T.

```

* Initialize Memory Variables
STORE 000 TO MABAG1
STORE 000 TO MABAG2
STORE 000 TO MABAG3
STORE 000 TO MABAG4
STORE 000 TO MABAG5
STORE 000 TO MABAG6
STORE 000 TO MABAG7
STORE 000 TO MTA1
STORE 000 TO MTA2
STORE 000 TO MTA3
STORE 000 TO MTA4
STORE 000 TO MTA5
STORE 000 TO MTA6
STORE 000 TO MTA7

```

```

STORE 000 TO MBBAG1
STORE 000 TO MBBAG2
STORE 000 TO MBBAG3
STORE 000 TO MBBAG4
STORE 000 TO MBBAG5
STORE 000 TO MBBAG6
STORE 000 TO MBBAG7
STORE 0000 TO MBLDG1
STORE 0000 TO MBLDG2
STORE 0000 TO MBLDG3
STORE 0000 TO MBLDG4
STORE 0000 TO MBLDG5
STORE 0000 TO MBLDG6
STORE 0000 TO MBLDG7
STORE 0000 TO MBLDG8
STORE 000 TO MCBAG1
STORE 000 TO MCBAG2
STORE 000 TO MCBAG3
STORE 000 TO MCBAG4
STORE 000 TO MCBAG5
STORE 000 TO MCBAG6
STORE 000 TO MCBAG7
STORE 000 TO MAUTH_ENL
STORE SPACE(12) TO MOFFICE
STORE 000 TO MAUTH_OFF
STORE SPACE(5) TO MORGSHP1
STORE SPACE(5) TO MORGSHP2
STORE SPACE(5) TO MORGSHP3
STORE SPACE(5) TO MORGSHP4
STORE SPACE(5) TO MORGSHP5
STORE SPACE(5) TO MORGSHP6
STORE SPACE(5) TO MORGSHP7
STORE SPACE(2) TO MGRADE
STORE 000000 TO MSQF
STORE 000 TO MUBAG1
STORE 000 TO MUBAG2
STORE 000 TO MUBAG3
STORE 000 TO MUBAG4
STORE 000 TO MUBAG5
STORE 000 TO MUBAG6
STORE 000 TO MUBAG7

```

\* Draw Input Screen

CLEAR

DO WHILE .T.

    TODAY=DATE()

    CLEAR

    ● 1.0 TO 3.73

    ● 2.11 SAY 'C O N F I G U R A T I O N   D A T A   E D I T   '

    ● 2.59 SAY ' R O U T I N E '

    ● 6.0 TO 20.77 DOUBLE

    ● 7.48 SAY 'Office Symbol: '

    ● 8.10 SAY 'Senior Grade: '

    ● 8.24 SAY 'Officers: '

    ● 8.43 SAY 'Enlisted: '

- 9,20 SAY 'Authorized TA's: '
- 11,42 SAY 'Buildings: '
- 14,42 SAY 'Square Feet: '
- 15,42 SAY 'Mobility Taskings'
- 16,30 SAY 'Org/Shop A-Bag B-Bag U-Bag C-BAG'

READ

\* Input Office Symbol

● 24,15 SAY 'Enter Office Symbol' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'

READ

\* Search For Requested Office Symbol

LOCATE FOR 'OFFICE' = 'MOFFICE'

IF .NOT. FOUND()

\* Office Symbol Is Not In The File

● 24,15

● 24,15 SAY 'Office Symbol ' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'

● 24,42 SAY 'cannot be found.'

CLEAR GETS

GOON = ' '

DO WHILE .NOT. GOON# 'YyNn'

● 23,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

ENDDO

IF UPPER(GOON)='N'

● 23,15 SAY 'Configuration Data/Resume File Main Menu'

CLEAR

RETURN

ENDIF

CLEAR

LOOP

ENDIF

\* If Record Is Located, Display Data

CLEAR

DO WHILE .T.

TODAY=DATE()

CLEAR

● 1,9 TO 3,73

● 2,11 SAY 'C O N F I G U R A T I O N   D A T A   E D I T   '

● 2,59 SAY 'R O U T I N E'

● 6,0 TO 20,77 DOUBLE

● 7,48 SAY 'Office Symbol: ' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'

● 8,10 SAY 'Senior Grade: ' GET GRADE PICTURE '9A'

● 8,24 SAY 'Officers: ' GET AUTH\_OFF PICTURE '999'

● 8,43 SAY 'Enlisted: ' GET AUT\_ENL PICTURE '999'

● 9,20 SAY 'Authorized TA's: ' GET TA1 PICTURE '999'

● 9,42 GET TA2 PICTURE '999'

● 9,46 GET TA3 PICTURE '999'

● 9,50 GET TA4 PICTURE '999'  
 ● 9,54 GET TA5 PICTURE '999'  
 ● 9,58 GET TA6 PICTURE '999'  
 ● 9,66 GET TA7 PICTURE '999'  
 ● 11,42 SAY 'Buildings: ' GET BLDG1 PICTURE '9999'  
 ● 11,59 GET BLDG2 PICTURE '9999'  
 ● 11,63 GET BLDG3 PICTURE '9999'  
 ● 11,67 GET BLDG4 PICTURE '9999'  
 ● 12,55 GET BLDG5 PICTURE '9999'  
 ● 12,59 GET BLDG6 PICTURE '9999'  
 ● 12,63 GET BLDG7 PICTURE '9999'  
 ● 12,67 GET BLDG8 PICTURE '9999'  
 ● 14,42 SAY 'Square Feet: ' GET SQF PICTURE '999999'  
 ● 15,42 SAY 'Mobility Taskings'  
 ● 16,30 SAY 'Org/Shop A-Bag B-Bag U-Bag C-BAG'  
 ● 17,40 GET ORGSHP1  
 ● 17,50 GET ABAG1 PICTURE '999'  
 ● 17,57 GET BBAG1 PICTURE '999'  
 ● 17,64 GET UBAG1 PICTURE '999'  
 ● 17,71 GET CBAG1 PICTURE '999'  
 ● 18,40 GET ORGSHP2  
 ● 18,50 GET ABAG2 PICTURE '999'  
 ● 18,57 GET BBAG2 PICTURE '999'  
 ● 18,64 GET UBAG1 PICTURE '999'  
 ● 18,71 GET CBAG1 PICTURE '999'  
 ● 19,40 GET ORGSHP3  
 ● 19,50 GET ABAG3 PICTURE '999'  
 ● 19,57 GET BBAG3 PICTURE '999'  
 ● 19,64 GET UBAG3 PICTURE '999'  
 ● 19,71 GET CBAG3 PICTURE '999'  
 ● 20,40 GET ORGSHP4  
 ● 20,50 GET ABAG4 PICTURE '999'  
 ● 20,57 GET BBAG4 PICTURE '999'  
 ● 20,64 GET UBAG4 PICTURE '999'  
 ● 20,71 GET CBAG4 PICTURE '999'  
 ● 21,40 GET ORGSHP5  
 ● 21,50 GET ABAG5 PICTURE '999'  
 ● 21,57 GET BBAG5 PICTURE '999'  
 ● 21,64 GET UBAG4 PICTURE '999'  
 ● 21,71 GET CBAG4 PICTURE '999'  
 ● 22,40 GET ORGSHP6  
 ● 22,50 GET ABAG6 PICTURE '999'  
 ● 22,57 GET BBAG6 PICTURE '999'  
 ● 22,64 GET UBAG6 PICTURE '999'  
 ● 22,71 GET CBAG6 PICTURE '999'  
 ● 23,40 GET ORGSHP7  
 ● 23,50 GET ABAG7 PICTURE '999'  
 ● 23,57 GET BBAG7 PICTURE '999'  
 ● 23,64 GET UBAG7 PICTURE '999'  
 ● 23,71 GET CBAG7 PICTURE '999'

CLEAR GETS

CORRECT = ' '

DO WHILE .NOT. CORRECT# 'YyNn'

```

● 24,15
● 24,15 SAY 'Is this the correct record? (Y/N)' GET CORRECT
READ
ENDDO

IF UPPER(CORRECT)='N'
● 24,15
GOON = ' '

DO WHILE .NOT. GOON='YyNn'
● 24,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
READ
● 24,15
ENDDO

IF UPPER(GOON)='N'
●22,15 SAY 'Configuration Data/Resume File Main Menu'
CLEAR
RETURN
ENDIF

LOOP
ENDIF
TODAY=DATE()
CLEAR
● 1,9 TO 3,73
● 2,11 SAY 'C O N F I G U R A T I O N   D A T A   E D I T   '
● 2,59 SAY 'R O U T I N E'
● 6,0 TO 20,77 DOUBLE
● 7,48 SAY 'Office Symbol: ' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'
● 8,10 SAY 'Senior Grade: ' GET GRADE PICTURE '9A'
● 8,24 SAY 'Officers: ' GET AUTH_OFF PICTURE '999'
● 8,43 SAY 'Enlisted: ' GET AUT_ENL PICTURE '999'
● 9,20 SAY 'Authorized TA's: ' GET TA1 PICTURE '999'
● 9,42 GET TA2 PICTURE '999'
● 9,46 GET TA3 PICTURE '999'
● 9,50 GET TA4 PICTURE '999'
● 9,54 GET TA5 PICTURE '999'
● 9,58 GET TA6 PICTURE '999'
● 9,66 GET TA7 PICTURE '999'
● 11,42 SAY 'Buildings: ' GET BLDG1 PICTURE '9999'
● 11,59 GET BLDG2 PICTURE '9999'
● 11,63 GET BLDG3 PICTURE '9999'
● 11,67 GET BLDG4 PICTURE '9999'
● 12,55 GET BLDG5 PICTURE '9999'
● 12,59 GET BLDG6 PICTURE '9999'
● 12,63 GET BLDG7 PICTURE '9999'
● 12,67 GET BLDG8 PICTURE '9999'
● 14,42 SAY 'Square Feet: ' GET SQF PICTURE '999999'
● 15,42 SAY 'Mobility Taskings'
● 16,30 SAY 'Org/Shop A-Bag B-Bag U-Bag C-BAG'
● 17,40 GET ORGSHP1
● 17,50 GET ABAG1 PICTURE '999'
● 17,57 GET BBAG1 PICTURE '999'
● 17,64 GET UBAG1 PICTURE '999'

```

```

● 17,71 GET CBAG1 PICTURE '999'
● 18,40 GET ORGSHP2
● 18,50 GET ABAG2 PICTURE '999'
● 18,57 GET BBAG2 PICTURE '999'
● 18,64 GET UBAG1 PICTURE '999'
● 18,71 GET CBAG1 PICTURE '999'
● 19,40 GET ORGSHP3
● 19,50 GET ABAG3 PICTURE '999'
● 19,57 GET BBAG3 PICTURE '999'
● 19,64 GET UBAG3 PICTURE '999'
● 19,71 GET CBAG3 PICTURE '999'
● 20,40 GET ORGSHP4
● 20,50 GET ABAG4 PICTURE '999'
● 20,57 GET BBAG4 PICTURE '999'
● 20,64 GET UBAG4 PICTURE '999'
● 20,71 GET CBAG4 PICTURE '999'
● 21,40 GET ORGSHP5
● 21,50 GET ABAG5 PICTURE '999'
● 21,57 GET BBAG5 PICTURE '999'
● 21,64 GET UBAG4 PICTURE '999'
● 21,71 GET CBAG4 PICTURE '999'
● 22,40 GET ORGSHP6
● 22,50 GET ABAG6 PICTURE '999'
● 22,57 GET BBAG6 PICTURE '999'
● 22,64 GET UBAG6 PICTURE '999'
● 22,71 GET CBAG6 PICTURE '999'
● 23,40 GET ORGSHP7
● 23,50 GET ABAG7 PICTURE '999'
● 23,57 GET BBAG7 PICTURE '999'
● 23,64 GET UBAG7 PICTURE '999'
● 23,71 GET CBAG7 PICTURE '999'
● 24,15 SAY 'Go ahead and make the necessary changes.'
READ
● 24,15

```

\* Check For Correct Entry

CORRECT = ' '

DO WHILE .NOT. CORRECT# 'YyNn'

● 24,15 SAY 'Is This Correct? (Y/N)' GET CORRECT

READ

● 24,15

ENDDO

IF UPPER(CORRECT) = 'N'

GOON = ' '

DO WHILE .NOT. GOON# 'YyNn'

● 24,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

● 24,15

ENDDO

IF UPPER(GOON) = 'N'

● 24,15 SAY 'Returning to Configuration Data/Resume File Main Menu'

CLEAR

RETURN  
ENDIF

ENDDO  
ENDIF

MABAG1 = ABAG1  
MABAG2 = ABAG2  
MABAG3 = ABAG3  
MABAG4 = ABAG4  
MABAG5 = ABAG5  
MABAG6 = ABAG6  
MABAG7 = ABAG7  
MTA1 = TA1  
MTA2 = TA2  
MTA3 = TA3  
MTA4 = TA4  
MTA5 = TA5  
MTA6 = TA6  
MTA7 = TA7  
MBBAG1 = BBAG1  
MBBAG2 = BBAG2  
MBBAG3 = BBAG3  
MBBAG4 = BBAG4  
MBBAG5 = BBAG5  
MBBAG6 = BBAG6  
MBBAG7 = BBAG7  
MBLDG1 = BLDG1  
MBLDG2 = BLDG2  
MBLDG3 = BLDG3  
MBLDG4 = BLDG4  
MBLDG5 = BLDG5  
MBLDG6 = BLDG6  
MBLDG7 = BLDG7  
MBLDG8 = BLDG8  
MCBAG1 = CBAG1  
MCBAG2 = CBAG2  
MCBAG3 = CBAG3  
MCBAG4 = CBAG4  
MCBAG5 = CBAG5  
MCBAG6 = CBAG6  
MCBAG7 = CBAG7  
MAUTH\_ENL = AUTH\_ENL  
MOFFICE = OFFICE  
MAUTH\_OFF = AUTH\_OFF  
MORGSH1 = ORGSHP1  
MORGSH2 = ORGSHP2  
MORGSH3 = ORGSHP3  
MORGSH4 = ORGSHP4  
MORGSH5 = ORGSHP5  
MORGSH6 = ORGSHP6  
MORGSH7 = ORGSHP7  
MGRADE = GRADE  
MSQF = SQF  
MUBAG1 = UBAG1

MUBAG2 = UBAG2  
MUBAG3 = UBAG3  
MUBAG4 = UBAG4  
MUBAG5 = UBAG5  
MUBAG6 = UBAG6  
MUBAG7 = UBAG7

REPLACE ABAG1 WITH MABAG1  
REPLACE ABAG2 WITH MABAG2  
REPLACE ABAG3 WITH MABAG3  
REPLACE ABAG4 WITH MABAG4  
REPLACE ABAG5 WITH MABAG5  
REPLACE ABAG6 WITH MABAG6  
REPLACE ABAG7 WITH MABAG7  
REPLACE TA1 WITH MTA1  
REPLACE TA2 WITH MTA2  
REPLACE TA3 WITH MTA3  
REPLACE TA4 WITH MTA4  
REPLACE TA5 WITH MTA5  
REPLACE TA6 WITH MTA6  
REPLACE TA7 WITH MTA7  
REPLACE BBAG1 WITH MBBAG1  
REPLACE BBAG2 WITH MBBAG2  
REPLACE BBAG3 WITH MBBAG3  
REPLACE BBAG4 WITH MBBAG4  
REPLACE BBAG5 WITH MBBAG5  
REPLACE BBAG6 WITH MBBAG6  
REPLACE BBAG7 WITH MBBAG7  
REPLACE BLDG1 WITH MBLDG1  
REPLACE BLDG2 WITH MBLDG2  
REPLACE BLDG3 WITH MBLDG3  
REPLACE BLDG4 WITH MBLDG4  
REPLACE BLDG5 WITH MBLDG5  
REPLACE BLDG6 WITH MBLDG6  
REPLACE BLDG7 WITH MBLDG7  
REPLACE BLDG8 WITH MBLDG8  
REPLACE CBAG1 WITH MCBAG1  
REPLACE CBAG2 WITH MCBAG2  
REPLACE CBAG3 WITH MCBAG3  
REPLACE CBAG4 WITH MCBAG4  
REPLACE CBAG5 WITH MCBAG5  
REPLACE CBAG6 WITH MCBAG6  
REPLACE CBAG7 WITH MCBAG7  
REPLACE AUTH\_ENL WITH MAUTH\_ENL  
REPLACE OFFICE WITH MOFFICE  
REPLACE AUTH\_OFF WITH MAUTH\_OFF  
REPLACE ORGSHP1 WITH MORGSHP1  
REPLACE ORGSHP2 WITH MORGSHP2  
REPLACE ORGSHP3 WITH MORGSHP3  
REPLACE ORGSHP4 WITH MORGSHP4  
REPLACE ORGSHP5 WITH MORGSHP5  
REPLACE ORGSHP6 WITH MORGSHP6  
REPLACE ORGSHP7 WITH MORGSHP7  
REPLACE GRADE WITH MGRADE  
REPLACE SQF WITH MSQF

```

REPLACE UBAG1 WITH MUBAG1
REPLACE UBAG2 WITH MUBAG2
REPLACE UBAG3 WITH MUBAG3
REPLACE UBAG4 WITH MUBAG4
REPLACE UBAG5 WITH MUBAG5
REPLACE UBAG6 WITH MUBAG6
REPLACE UBAG7 WITH MUBAG7

```

```

* Check For Another Edit

```

```

  ANOTHER = ' '

```

```

  DO WHILE .NOT. ANOTHER# 'YyNn'

```

```

    @24,15 SAY 'Update Another Record? (Y/N)' GET ANOTHER

```

```

    READ

```

```

    @ 24,15

```

```

  ENDDO

```

```

  IF UPPER (ANOTHER)='N'

```

```

    @24,15 SAY 'Returning to Configuration Data/Resume File Main Menu'

```

```

    CLEAR

```

```

    RETURN

```

```

  ENDIF

```

```

ENDDO

```

```

ENDDO

```

```

* EOF: RESEDT.PRG

```

```

*****

```

```

* Program.: RESDEL.PRG

```

```

* Author...: Capt Jeff Bailey

```

```

* Last Revision: 30 August 1988

```

```

* Notes....: Delete records from the Configuration Data/Resume File

```

```

*           Called from RES.PRG

```

```

USE RES

```

```

DO MORECORD

```

```

DO WHILE .T.

```

```

  * Initialize Memory Variables

```

```

  STORE 000 TO MABAG1

```

```

  STORE 000 TO MABAG2

```

```

  STORE 000 TO MABAG3

```

```

  STORE 000 TO MABAG4

```

```

  STORE 000 TO MABAG5

```

```

  STORE 000 TO MABAG6

```

```

  STORE 000 TO MABAG7

```

```

  STORE 000 TO MTA1

```

```

  STORE 000 TO MTA2

```

```

  STORE 000 TO MTA3

```

```

  STORE 000 TO MTA4

```

```

  STORE 000 TO MTA5

```

```

  STORE 000 TO MTA6

```

```

STORE 000 TO MTA7
STORE 000 TO MBBAG1
STORE 000 TO MBBAG2
STORE 000 TO MBBAG3
STORE 000 TO MBBAG4
STORE 000 TO MBBAG5
STORE 000 TO MBBAG6
STORE 000 TO MBBAG7
STORE 0000 TO MBLDG1
STORE 0000 TO MBLDG2
STORE 0000 TO MBLDG3
STORE 0000 TO MBLDG4
STORE 0000 TO MBLDG5
STORE 0000 TO MBLDG6
STORE 0000 TO MBLDG7
STORE 0000 TO MBLDG8
STORE 000 TO MCBAG1
STORE 000 TO MCBAG2
STORE 000 TO MCBAG3
STORE 000 TO MCBAG4
STORE 000 TO MCBAG5
STORE 000 TO MCBAG6
STORE 000 TO MCBAG7
STORE 000 TO MAUTH_ENL
STORE SPACE(12) TO MOFFICE
STORE 000 TO MAUTH_OFF
STORE SPACE(5) TO MORGSHP1
STORE SPACE(5) TO MORGSHP2
STORE SPACE(5) TO MORGSHP3
STORE SPACE(5) TO MORGSHP4
STORE SPACE(5) TO MORGSHP5
STORE SPACE(5) TO MORGSHP6
STORE SPACE(5) TO MORGSHP7
STORE SPACE(2) TO MGRADE
STORE 000000 TO MSQF
STORE 000 TO MUBAG1
STORE 000 TO MUBAG2
STORE 000 TO MUBAG3
STORE 000 TO MUBAG4
STORE 000 TO MUBAG5
STORE 000 TO MUBAG6
STORE 000 TO MUBAG7

```

\* Draw Input Screen

CLEAR

DO WHILE .T.

    TODAY=DATE()

    CLEAR

    ● 1,7 TO 3,74

    ● 2,9 SAY 'C O N F I G U R A T I O N   D A T A   D E L E T E   '

    ● 2,61 SAY 'R O U T I N E'

    ● 6,0 TO 20,77 DOUBLE

    ● 7,48 SAY 'Office Symbol: '

    ● 8,10 SAY 'Senior Grade: '

    ● 8,24 SAY 'Officers: '

- 8,43 SAY 'Enlisted: '
- 9,20 SAY 'Authorized TA's: '
- 11,42 SAY 'Buildings: '
- 14,42 SAY 'Square Feet: '
- 15,42 SAY 'Mobility Taskings'
- 16,30 SAY 'Org/Shop A-Bag B-Bag U-Bag C-BAG'

READ

\* Input Office Symbol  
 ● 24,15 SAY 'Enter Office Symbol' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'  
 READ

\* Search For Requested Office Symbol  
 LOCATE FOR 'OFFICE' = 'MOFFICE'

IF .NOT. FOUND()  
 \* Office Symbol Is Not In The File  
 ● 24,15  
 ● 24,15 SAY 'Office Symbol ' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'  
 ● 24,42 SAY 'cannot be found.'  
 CLEAR GETS

GOON = . . .  
 DO WHILE .NOT. GOON='YyNn'  
 ● 23,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON  
 READ  
 ENDDO

IF UPPER(GOON)='N'  
 ●23,15 SAY 'Configuration Data/Resume File Main Menu'  
 CLEAR  
 RETURN  
 ENDIF

CLEAR  
 LOOP  
 ENDIF

\* If Record Is Located, Display Data

CLEAR  
 DO WHILE .T.  
 TODAY=DATE()  
 CLEAR  
 ● 1,7 TO 3,74  
 ● 2,9 SAY 'C O N F I G U R A T I O N   D A T A   D E L E T E '  
 ● 2,61 SAY 'R O U T I N E'  
 ● 6,0 TO 20,77 DOUBLE  
 ● 7,48 SAY 'Office Symbol: ' GET MOFFICE PICTURE 'XXXXXXXXXXXXX'  
 ● 8,10 SAY 'Senior Grade: ' GET GRADE PICTURE '9A'  
 ● 8,24 SAY 'Officers: ' GET AUTH\_OFF PICTURE '999'  
 ● 8,43 SAY 'Enlisted: ' GET AUT\_ENL PICTURE '999'  
 ● 9,20 SAY 'Authorized TA's: ' GET TA1 PICTURE '999'  
 ● 9,42 GET TA2 PICTURE '999'

- 9.46 GET TA3 PICTURE '999'
- 9.50 GET TA4 PICTURE '999'
- 9.54 GET TA5 PICTURE '999'
- 9.58 GET TA6 PICTURE '999'
- 9.66 GET TA7 PICTURE '999'
- 11.42 SAY 'Buildings: ' GET BLDG1 PICTURE '9999'
- 11.59 GET BLDG2 PICTURE '9999'
- 11.63 GET BLDG3 PICTURE '9999'
- 11.67 GET BLDG4 PICTURE '9999'
- 12.55 GET BLDG5 PICTURE '9999'
- 12.59 GET BLDG6 PICTURE '9999'
- 12.63 GET BLDG7 PICTURE '9999'
- 12.67 GET BLDG8 PICTURE '9999'
- 14.42 SAY 'Square Feet: ' GET SQF PICTURE '999999'
- 15.42 SAY 'Mobility Taskings'
- 16.30 SAY 'Org/Shop A-Bag B-Bag U-Bag C-BAG'
- 17.40 GET ORGSHP1
- 17.50 GET ABAG1 PICTURE '999'
- 17.57 GET BBAG1 PICTURE '999'
- 17.64 GET UBAG1 PICTURE '999'
- 17.71 GET CBAG1 PICTURE '999'
- 18.40 GET ORGSHP2
- 18.50 GET ABAG2 PICTURE '999'
- 18.57 GET BBAG2 PICTURE '999'
- 18.64 GET UBAG1 PICTURE '999'
- 18.71 GET CBAG1 PICTURE '999'
- 19.40 GET ORGSHP3
- 19.50 GET ABAG3 PICTURE '999'
- 19.57 GET BBAG3 PICTURE '999'
- 19.64 GET UBAG3 PICTURE '999'
- 19.71 GET CBAG3 PICTURE '999'
- 20.40 GET ORGSHP4
- 20.50 GET ABAG4 PICTURE '999'
- 20.57 GET BBAG4 PICTURE '999'
- 20.64 GET UBAG4 PICTURE '999'
- 20.71 GET CBAG4 PICTURE '999'
- 21.40 GET ORGSHP5
- 21.50 GET ABAG5 PICTURE '999'
- 21.57 GET BBAG5 PICTURE '999'
- 21.64 GET UBAG4 PICTURE '999'
- 21.71 GET CBAG4 PICTURE '999'
- 22.40 GET ORGSHP6
- 22.50 GET ABAG6 PICTURE '999'
- 22.57 GET BBAG6 PICTURE '999'
- 22.64 GET UBAG6 PICTURE '999'
- 22.71 GET CBAG6 PICTURE '999'
- 23.40 GET ORGSHP7
- 23.50 GET ABAG7 PICTURE '999'
- 23.57 GET BBAG7 PICTURE '999'
- 23.64 GET UBAG7 PICTURE '999'
- 23.71 GET CBAG7 PICTURE '999'

CLEAR GETS

MCORRECT = . .

```

DO WHILE .NOT. MCorrects`YyNn`
  ● 24,15 SAY SPACE (50)
  ● 24,15 SAY `Is this the record you want to delete? (Y/N)`;
  GET MCorrect
  READ
ENDDO

IF UPPER(MCorrect) = `N`
  ● 24,15 SAY SPACE(50)
  MGOON = ` `

  DO WHILE .NOT. MGOONs`YyNn`
    ● 24,15 SAY `Would You Like To Continue? (Y/N)` GET MGOON
    READ
    ● 24,15 SAY SPACE(50)
  ENDDO

  IF UPPER(MGOON) = `N`
    ●24,15 SAY `Returning to Configuration Data/Resume File Main Menu`
    CLEAR
    RETURN
  ENDIF

  LOOP
ENDIF

MCorrect = ` `

DO WHILE .NOT. MCorrects`YyNn`
  ●24,15 SAY `Are you sure that you want to delete this record? (Y/N)`;
  GET MCorrect
  ● 24,15 SAY SPACE(50)
  READ
ENDDO

IF UPPER(MCorrect) = `N`
  ●24,15 SAY `This record will not be deleted.`
  MGOON = ` `

  DO WHILE .NOT. MGOONs`YyNn`
    ● 24,15 SAY `Would You Like To Continue? (Y/N)` GET MGOON
    READ
    ● 24,15 SAY SPACE(50)
  ENDDO

  IF UPPER(MGOON) = `N`
    ●24,15 SAY `Returning to Configuration Data/Resume File Main Menu`
    CLEAR
    RETURN
  ENDIF
ENDIF
ENDDO
ENDIF

DELETE ALL FOR OFFICE = MOFFICE
PACK

```

```

* Check for another delete
MANOTHER = ' '
DO WHILE .NOT. MANOTHERs'YyNn'
  @24,15 SAY SPACE(60)
  @24,15 SAY 'This record has been deleted.'
  DO PAUSE
  @24,15 SAY SPACE(60)
  @24,15 SAY 'Would you like to delete another record? (Y/N)';
  GET MANOTHER
  READ
  @ 24,15 SAY SPACE(60)
ENDDO

IF UPPER (MANOTHER)='N'
  @24,15 SAY 'Returning to Configuration Data/Resume File Main Menu'
  CLEAR
  RETURN
ENDIF

ENDDO
ENDDO

* EOF: RESDEL.PRG

*****

* Program.: RESRPT.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 30 August 1988
* Notes....: Create Reports from the Configuration Data/Resume File
*           Called from RES.PRG

USE RES

DO MORECORD

DO WHILE .T.
  TODAY=DATE()
  CLEAR
  DO WHILE .T.
    TODAY=DATE()
    CLEAR
    @ 1,9 TO 3,71
    @ 2,11 SAY 'C O N F I G U R A T I O N   D A T A   R E P O R T S   '
    @ 2,65 SAY 'R O U T I N E'
    @ 6,0 TO 20,77 DOUBLE
    @ 5,25 SAY 'DATE                TIME'
    @ 6,23 SAY TODAY
    @ 6,39 SAY TIME()
    @ 8,20 SAY '[A] All Organizations'
    @ 10,20 SAY '[B] Organization By Office Symbol'
    @ 12,20 SAY '[C] Organization By Table of Allowances'
    @ 14,20 SAY '[H] Help - How To Use The Reports System'
    @ 16,20 SAY '[Q] Quit'
    @ 23,8 SAY '[Enter Selection (A - C, H for help, or Q to quit) : :]'

```

```

I=0
DO WHILE I=0
  I=INKEY()
  @ 6,39 SAY TIME()
  @ 23,60 SAY ""

  IF UPPER(CHR(I))# 'ABCHQ'
    EXIT
  ENDIF

  I=0
ENDDO

@ 23,60 SAY UPPER(CHR(I))

* Input Printer/Screen Request
J = 251

DO CASE

  CASE CHR(I) # 'Qq'
    SAVE TO RES.MEM
    CLEAR ALL
    CLEAR
    CLOSE DATABASES
    RETURN

  CASE CHR(I) # 'Aa'
    @ 8,18 SAY CHR(J)
    DO PAUSE
    DO RESRPTA

  CASE CHR(I) # 'Bb'
    @10,18 SAY CHR(J)
    DO PAUSE
    DO RESRPTB

  CASE CHR(I) # 'Cc'
    @12,18 SAY CHR(J)
    DO PAUSE
    DO RESRPTC

  CASE CHR(I) # 'Hh'
    @14,18 SAY CHR(J)
    DO RESRPTH

ENDCASE

ENDDO

* EOF: RESRPT.PRG

```

\*\*\*\*\*

```

* Program.: RESRPTA.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 30 August 1988
* Notes....: Create a report containing all records in the Configuration
*             Data/Resume File
*             Called from RESRPT.PRG

```

```
USE RES
```

```
PRINTER = ' '
```

```
DO WHILE .T.
```

```
  CLEAR
```

```
  TEXT
```

```

This report will provide a list of all of the records in the
Configuration Data/Resume File.

```

```
  ENDTXT
```

```
DO WHILE .NOT. PRINTER# 'PpSsQq'
```

```
  @22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';
```

```
  GET PRINTER
```

```
  READ
```

```
ENDDO
```

```
CLEAR
```

```
IF UPPER(PRINTER)='Q'
```

```
  SAVE TO RES.MEM
```

```
  CLEAR ALL
```

```
  CLEAR
```

```
  CLOSE DATABASES
```

```
  RETURN
```

```
ENDIF
```

```
IF UPPER(PRINTER)='S'
```

```
  TEXT
```

```

Most reports are longer than one screen.  Therefore, they will
scroll up the screen until the end of the report is reached.

```

```
To STOP the report as it scrolls up the screen type
```

```
  <CONTROL S>
```

```
To START the report scrolling again type
```

```
  <RETURN>
```

```

ENDTEXT

WAIT
CLEAR
REPORT FORM RESRPTA.FRM TO SCREEN
WAIT
ENDIF

IF UPPER(PRINTER)='P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM 000RPTA.FRM TO PRINT
ENDIF

CLEAR

RETURN

ENDDO

* EOF: RESRPTA.PRG

*****

* Program.: RESRPTB.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 30 August 1988
* Notes....: Create a report of an organization in the Configuration
*             Data/Resume File by Office Symbol
*             Called from RESRPT.PRG

USE RES

PRINTER = ' '

DO WHILE .T.
  CLEAR

  TEXT

  This report will provide configuration data on a single
  organization specified by the user.

ENDTEXT

* Initialize Memory Variable
STORE SPACE(12) TO MOFFICE

```

```

* Input Office Symbol
@ 20,15 SAY 'Enter Office Symbol of the organization ';
GET MOFFICE PICTURE 'XXXXXXXXXXXXX'
READ

SET FILTER TO OFFICE = MOFFICE
GO TOP
CLEAR

DO WHILE .NOT. PRINTER#PpS#Qq'
  @22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';
  GET PRINTER
  READ
ENDDO

CLEAR

IF UPPER(PRINTER)='Q'
  SAVE TO RES.MEM
  CLEAR ALL
  CLEAR
  CLOSE DATABASES
  RETURN
ENDIF

IF UPPER(PRINTER)='S'

  CLEAR
  REPORT FORM RESRPTB.FRM TO SCREEN
  WAIT
ENDIF

IF UPPER(PRINTER)='P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM RESRPTB.FRM TO PRINT
ENDIF

CLEAR

RETURN

ENDDO

* EOF: RESRPTB.PRG

*****

* Program.: RESRPTC.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 30 August 1988
* Notes...: Create a report of organizations in the Configuration
*           Data/Resume File by authorized use of a user specified
*           Table of Allowances
*           Called from RESRPT.PRG

```

USE RES

PRINTER = ' '

DO WHILE .T.

CLEAR

TEXT

This report will provide configuration data on all organizations  
authorized to use a Table of Allowances specified by the user.

ENDTEXT

\* Initialize Memory Variable

STORE 000 TO MTA

\* Input Table of Allowances

@ 20,15 SAY 'Enter Table of Allowances ' GET MTA PICTURE '999'

READ

SET FILTER TO TA1 = MTA .OR. TA2 = MTA .OR. TA3 = MTA .OR. TA4 = MTA;  
.OR. TA5 = MTA .OR. TA6 = MTA .OR. TA7 = MTA

GO TOP

CLEAR

DO WHILE .NOT. PRINTER# 'PpSsQq'

@22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';

GET PRINTER

READ

ENDDO

CLEAR

IF UPPER(PRINTER) = 'Q'

SAVE TO RES.MEM

CLEAR ALL

CLEAR

CLOSE DATABASES

RETURN

ENDIF

IF UPPER(PRINTER) = 'S'

CLEAR

REPORT FORM RESRPTC.FRM TO SCREEN

WAIT

ENDIF

```

IF UPPER(PRINTER)='P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM RESRPTC.FRM TO PRINT
ENDIF

CLEAR

RETURN

ENDDO

```

```
* EOF: RESRPTC.PRG
```

```
*****
```

```

* Program.: RESRPTH.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 30 August 1988
* Notes....: HELP for the Configuration Data/Resume List Reports
*           Module of the Equipment Management Information System
*           Called From RESRPT.PRG

```

```
CLEAR
```

```
TEXT
```

```

Welcome to the Configuration Data/Resume File reports module of
the Equipment Management Information System. This module will provide
you with information needed to help ensure organizations supported
by you are authorized the equipment they require and are allowed.

```

```
Currently, this module provides the following reports:
```

```

*****
*                                     *
*           All Organizations In The Log           *
*                                     *
*           Organizations By Office Symbol          *
*                                     *
*           Organization By Table of Allowances     *
*                                     *
*****

```

```

The requirement to maintain and manage configuration data is contained
in AFM 67-1, Vol II, Part 2, Ch 22, Para 26.

```

```
ENDTEXT
```

```

WAIT SPACE(11) + 'Press any key to return to the Configuration ';
'Data/Resume File Menu.'

```

```
CLEAR
```

```
RETURN
```

```
* EOF: RESRPTH.PRG
```

\*\*\*\*\*

\* Program.: RESHLP.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 30 August 1988  
\* Notes....: HELP for the Configuration Data/Resume File Module  
\* of the Equipment Management Information System  
\* Called From RES.PRG

CLEAR

TEXT

Welcome to the Configuration Data/Resume File module of the Equipment Management Information System. This module will assist you in maintaining configuration data on the organizations you support. It allows you to add, update, and delete your entries to the file. It also can provide you with several reports to help you use the configuration data efficiently.

Currently, this module supports the following tasks:

```
*****
*                                     *
*           Add Records To The File   *
*                                     *
*           Update Records In The File *
*                                     *
*           Delete Records From The File *
*                                     *
*           Process Reports            *
*                                     *
*****
```

The requirement for the Configuration Data/Resume File is outlined in AFM 67-1, Vol II, Part 2, Ch 22, Para 26.

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

\*\*\*\*\*

From the Configuration Data resume File menu, press the following letters to begin working:

To ADD records to the Configuration Data/Resume File press [A]

To UPDATE records in the Configuration Data/Resume File press [B]

To DELETE records in the Configuration Data/Resume File press [C]

To run a REPORT on information in the file press [D]

To QUIT using the system press [Q]

\*\*\*\*\*

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

The data elements used in the Configuration Data/Resume File are listed below. The template can be interpreted as follows: A '9' means a number is required, an 'A' means a letter is required, and an 'X' means either a number or a letter is allowed.

Common Name	Width	Template
A-BAG	3	999
Table of Allowances	3	999
B-BAG	3	999
Building Number	4	9999
C-BAG	3	999
Authorized Enlisted	3	999
Office Symbol	12	XXXXXXXXXXXX
Authorized Officers	3	999
Org/Shop Code	5	999AA
Senior Auth Grade	2	A9
Square Feet	6	999999
U-BAG	3	999

ENDTEXT

WAIT SPACE(11) + 'Press any key to return to the Configuration';  
' Data/Resume File menu.'

CLEAR

RETURN

\* EOF: RESHLP.PRG

\*\*\*\*\*

\* Program.: CUS.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes...: Perform Equipment Custodian List operations  
\*           Called from EMIS.PRG

USE CUS

```

DO WHILE .T.
  TODAY=DATE()
  CLEAR
  ● 1,15 TO 3,65
  ● 2,17 SAY 'EQUIPMENT CUSTODIAN LIST'
  ● 4,1 TO 20,77 DOUBLE
  ● 5,25 SAY 'DATE          TIME'
  ● 6,23 SAY TODAY
  ● 6,39 SAY TIME()
  ● 8,20 SAY '[A] Add A Custodian To The List'
  ● 10,20 SAY '[B] Update Custodian Information'
  ● 12,20 SAY '[C] Delete A Custodian From The List'
  ● 14,20 SAY '[D] Reports'
  ● 16,20 SAY '[H] Help - How To Use This System'
  ● 18,20 SAY '[Q] Quit'
  ● 22,8 SAY '[Enter Selection (A - D, H for help, or Q to quit) : :]'

  I=0
  DO WHILE I=0
    I=INKEY()
    ● 6,39 SAY TIME()
    ● 22,60 SAY ''

    IF UPPER(CHR(I))# 'ABCDHQ'
      EXIT
    ENDIF

    I=0
  ENDDO

  ● 22,60 SAY UPPER(CHR(I))

  DO CASE

    CASE CHR(I) # 'Qq'
      SAVE TO CUS.MEM
      CLEAR ALL
      CLEAR
      CLOSE DATABASES
      RETURN

    CASE CHR(I) # 'Aa'
      CLEAR
      CLOSE ALL
      DO CUSADD

    CASE CHR(I) # 'Bb'
      CLEAR
      CLOSE ALL
      DO CUSEDT

    CASE CHR(I) # 'Cc'
      CLEAR
      CLOSE ALL

```

DO CUSDEL

CASE CHR(I) \* 'Dd'  
CLEAR  
CLOSE ALL  
DO CUSRPT

CASE CHR(I) \* 'Hh'  
CLEAR  
CLOSE ALL  
DO CUSHLP

ENDCASE

ENDDO

\* EOF: CUS.PRG

\*\*\*\*\*

\* Program.: CUSADD.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes....: Add records to the Equipment Custodian List  
\*            Called from CUS.PRG

USE CUS

DO WHILE .T.

GO BOTTOM

\* Initialize Memory Variables

STORE CUSNR + 1 TO MCUSNR  
STORE SPACE(20) TO MLNAME  
STORE SPACE(15) TO MFNAME  
STORE SPACE(1) TO MMI  
STORE 0000 TO MTRAINDT  
STORE 0000 TO MDPRTDT  
STORE SPACE(2) TO MGRADE  
STORE 0000 TO MPHONE1  
STORE 0000 TO MPHONE2  
STORE SPACE(1) TO MPA1  
STORE SPACE(1) TO MPA2  
STORE SPACE(1) TO MPA3  
STORE SPACE(1) TO MPA4  
STORE SPACE(1) TO MPA5  
STORE SPACE(1) TO MPA6  
STORE SPACE(1) TO MPA7  
STORE SPACE(1) TO MPA8  
STORE SPACE(5) TO MORGSHP1  
STORE SPACE(5) TO MORGSHP2  
STORE SPACE(5) TO MORGSHP3  
STORE SPACE(5) TO MORGSHP4  
STORE SPACE(5) TO MORGSHP5  
STORE SPACE(5) TO MORGSHP6

STORE SPACE(5) TO MORGSHP7  
STORE SPACE(5) TO MORGSHP8

\* Draw Input Screen  
CLEAR

DO WHILE .T.

TODAY=DATE()

CLEAR

● 1,8 TO 3,72

● 2,10 SAY 'EQUIPMENT CUSTODIAN ADD'

● 2,58 SAY 'ROUTINE'

● 6,0 TO 21,77 DOUBLE

● 7,30 SAY 'Custodian Number: ' GET MCUSNR PICTURE '999'

CLEAR GETS

● 7,3 SAY 'Grade (E5, O2, etc.): ' GET MGRADE PICTURE 'A9'

● 8,3 SAY 'First Name: ' GET MFNAME PICTURE 'AAAAAAAAAAAAAAAA'

● 9,3 SAY 'Middle Initial: ' GET MMI PICTURE 'A'

● 10,3 SAY 'Last Name: ' GET MLNAME PICTURE 'AAAAAAAAAAAAAAAAAAAA'

● 11,3 SAY 'Date Trained: ' GET MTRAINDT PICTURE '9999'

● 11,25 SAY 'Projected Departure Date: ' GET MDPRTDT PICTURE '9999'

● 12,3 SAY 'Primary Phone: ' GET MPHONE1 PICTURE '9999'

● 12,25 SAY 'Alternate Phone: ' GET MPHONE2 PICTURE '9999'

● 13,3 SAY 'Organization/Shop Code: ' GET MORGSHP1 PICTURE '999AA'

● 13,35 SAY 'Primary/Alternate: ' GET MPA1 PICTURE 'A'

● 14,3 SAY 'Organization/Shop Code: ' GET MORGSHP2 PICTURE '999AA'

● 14,35 SAY 'Primary/Alternate: ' GET MPA2 PICTURE 'A'

● 15,3 SAY 'Organization/Shop Code: ' GET MORGSHP3 PICTURE '999AA'

● 15,35 SAY 'Primary/Alternate: ' GET MPA3 PICTURE 'A'

● 16,3 SAY 'Organization/Shop Code: ' GET MORGSHP4 PICTURE '999AA'

● 16,35 SAY 'Primary/Alternate: ' GET MPA4 PICTURE 'A'

● 17,3 SAY 'Organization/Shop Code: ' GET MORGSHP5 PICTURE '999AA'

● 17,35 SAY 'Primary/Alternate: ' GET MPA5 PICTURE 'A'

● 18,3 SAY 'Organization/Shop Code: ' GET MORGSHP6 PICTURE '999AA'

● 18,35 SAY 'Primary/Alternate: ' GET MPA6 PICTURE 'A'

● 19,3 SAY 'Organization/Shop Code: ' GET MORGSHP7 PICTURE '999AA'

● 19,35 SAY 'Primary/Alternate: ' GET MPA7 PICTURE 'A'

● 20,3 SAY 'Organization/Shop Code: ' GET MORGSHP8 PICTURE '999AA'

● 20,35 SAY 'Primary/Alternate: ' GET MPA8 PICTURE 'A'

READ

\* Check For Correct Entry

CORRECT=' '

DO WHILE .NOT. CORRECT# 'YyNn'

● 22,15 SAY 'Is This Correct? (Y/N)' GET CORRECT

READ

● 22,15

ENDDO

IF UPPER(CORRECT)='N'

GOON=' '

DO WHILE .NOT. GOON# 'YyNn'

● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

```

      ● 22,15
      ENDDO

      IF UPPER(GOON)='N'
        ●22,15 SAY 'Returning to Equipment Custodian List Main Menu'
        CLEAR
        RETURN
      ENDIF

      ENDDO
      ENDIF

      APPEND BLANK
      REPLACE CUSNR WITH MCUSNR
      REPLACE GRADE WITH MGRADE
      REPLACE FNAME WITH MFNAME
      REPLACE MI WITH MMI
      REPLACE LNAME WITH MLNAME
      REPLACE TRAIINDT WITH MTRAIINDT
      REPLACE DPRTDT WITH MDPRTDT
      REPLACE PHONE1 WITH MPHONE1
      REPLACE PHONE2 WITH MPHONE2
      REPLACE ORGSHP1 WITH MORGSHP1
      REPLACE PA1 WITH MPA1
      REPLACE ORGSHP2 WITH MORGSHP2
      REPLACE PA2 WITH MPA2
      REPLACE ORGSHP3 WITH MORGSHP3
      REPLACE PA3 WITH MPA3
      REPLACE ORGSHP4 WITH MORGSHP4
      REPLACE PA4 WITH MPA4
      REPLACE ORGSHP5 WITH MORGSHP5
      REPLACE PA5 WITH MPA5
      REPLACE ORGSHP6 WITH MORGSHP6
      REPLACE PA6 WITH MPA6
      REPLACE ORGSHP7 WITH MORGSHP7
      REPLACE PA7 WITH MPA7
      REPLACE ORGSHP8 WITH MORGSHP8
      REPLACE PA8 WITH MPA8

      * Check For Another Input
      ANOTHER=' '

      DO WHILE .NOT. ANOTHER# 'YyNn'
        ●22,15 SAY 'Add Another Equipment Custodian? (Y/N)' GET ANOTHER
        READ
        ● 22,15
      ENDDO

      IF UPPER (ANOTHER)='Y'
        CLEAR
        EXIT
      ENDIF

      IF UPPER (ANOTHER)='N'
        ●22,15 SAY 'Returning to Equipment Custodian List Main Menu'

```

```

    CLEAR
    RETURN
ENDIF

CLEAR

ENDDO

ENDDO

* EOF: CUSADD.PRG

*****

* Program.: CUSEDT.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Edit records in the Equipment Custodian List
*           Called from CUS.PRG

USE CUS

DO NORECORD

DO PAUSE

DO WHILE .T.
    * Initialize Memory Variables
    STORE 000 TO MCUSNR
    STORE SPACE(20) TO MLNAME
    STORE SPACE(15) TO MFNAME
    STORE SPACE(1) TO MMI
    STORE 0000 TO MTRAINDT
    STORE 0000 TO MDPRTDT
    STORE SPACE(2) TO MGRADE
    STORE 0000 TO MPHONE1
    STORE 0000 TO MPHONE2
    STORE SPACE(1) TO MPA1
    STORE SPACE(1) TO MPA2
    STORE SPACE(1) TO MPA3
    STORE SPACE(1) TO MPA4
    STORE SPACE(1) TO MPA5
    STORE SPACE(1) TO MPA6
    STORE SPACE(1) TO MPA7
    STORE SPACE(1) TO MPA8
    STORE SPACE(5) TO MORGSHP1
    STORE SPACE(5) TO MORGSHP2
    STORE SPACE(5) TO MORGSHP3
    STORE SPACE(5) TO MORGSHP4
    STORE SPACE(5) TO MORGSHP5
    STORE SPACE(5) TO MORGSHP6
    STORE SPACE(5) TO MORGSHP7
    STORE SPACE(5) TO MORGSHP8

    DO WHILE .T.

```

\* Draw Input Screen

CLEAR

● 1,7 TO 3,73  
● 2,9 SAY 'E Q U I P M E N T C U S T O D I A N E D I T'  
● 2,59 SAY 'R O U T I N E'  
● 6,0 TO 21,77 DOUBLE  
● 7,3 SAY 'Grade (E5, O2, etc.): '  
● 7,30 SAY 'Custodian Number: '  
● 8,3 SAY 'First Name: '  
● 9,3 SAY 'Middle Initial: '  
● 10,3 SAY 'Last Name: '  
● 11,3 SAY 'Date Trained: '  
● 11,25 SAY 'Projected Departure Date: '  
● 12,3 SAY 'Primary Phone: '  
● 12,25 SAY 'Alternate Phone: '  
● 13,3 SAY 'Organization/Shop Code: '  
● 13,35 SAY 'Primary/Alternate: '  
● 14,3 SAY 'Organization/Shop Code: '  
● 14,35 SAY 'Primary/Alternate: '  
● 15,3 SAY 'Organization/Shop Code: '  
● 15,35 SAY 'Primary/Alternate: '  
● 16,3 SAY 'Organization/Shop Code: '  
● 16,35 SAY 'Primary/Alternate: '  
● 17,3 SAY 'Organization/Shop Code: '  
● 17,35 SAY 'Primary/Alternate: '  
● 18,3 SAY 'Organization/Shop Code: '  
● 18,35 SAY 'Primary/Alternate: '  
● 19,3 SAY 'Organization/Shop Code: '  
● 19,35 SAY 'Primary/Alternate: '  
● 20,3 SAY 'Organization/Shop Code: '  
● 20,35 SAY 'Primary/Alternate: '

\* Input Custodian Number

● 22,15 SAY 'Enter Custodian Number' GET MCUSNR PICTURE '999'  
READ

\* Search For Requested Custodian Number

LOCATE FOR CUSNR = MCUSNR

IF .NOT. FOUND()

\* Custodian Number Is Not In The Log

● 22,15  
● 22,15 SAY 'Custodian Number' GET MCUSNR PICTURE '999'  
● 22,36 SAY 'cannot be found.'  
CLEAR GETS

GOON = ' '

DO WHILE .NOT. GOON# 'YyNn'

● 23,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON  
READ

ENDDO

IF UPPER(GOON)='N'

● 23,15 SAY 'Returning to Equipment Custodian List Main Menu'  
CLEAR  
RETURN

ENDIF

CLEAR  
LOOP  
ENDIF

\* If Record Is Located, Display Data

● 6,0 to 21,77  
● 7,30 SAY 'Custodian Number: ' GET MCUSNR PICTURE '999'  
● 7,3 SAY 'Grade (E5, O2, etc.): ' GET GRADE PICTURE 'A9'  
● 8,3 SAY 'First Name: ' GET FNAME PICTURE 'AAAAAAAAAAAAAAAA'  
● 9,3 SAY 'Middle Initial: ' GET MI PICTURE 'A'  
● 10,3 SAY 'Last Name: ' GET LNAME PICTURE 'AAAAAAAAAAAAAAAAAAAA'  
● 11,3 SAY 'Date Trained: ' GET TRAIENDT PICTURE '9999'  
● 11,25 SAY 'Projected Departure Date: ' GET DPRTDT PICTURE '9999'  
● 12,3 SAY 'Primary Phone: ' GET PHONE1 PICTURE '9999'  
● 12,25 SAY 'Alternate Phone: ' GET PHONE2 PICTURE '9999'  
● 13,3 SAY 'Organization/Shop Code: ' GET ORGSHP1 PICTURE '999AA'  
● 13,35 SAY 'Primary/Alternate: ' GET PA1 PICTURE 'A'  
● 14,3 SAY 'Organization/Shop Code: ' GET ORGSHP2 PICTURE '999AA'  
● 14,35 SAY 'Primary/Alternate: ' GET PA2 PICTURE 'A'  
● 15,3 SAY 'Organization/Shop Code: ' GET ORGSHP3 PICTURE '999AA'  
● 15,35 SAY 'Primary/Alternate: ' GET PA3 PICTURE 'A'  
● 16,3 SAY 'Organization/Shop Code: ' GET ORGSHP4 PICTURE '999AA'  
● 16,35 SAY 'Primary/Alternate: ' GET PA4 PICTURE 'A'  
● 17,3 SAY 'Organization/Shop Code: ' GET ORGSHP5 PICTURE '999AA'  
● 17,35 SAY 'Primary/Alternate: ' GET PA5 PICTURE 'A'  
● 18,3 SAY 'Organization/Shop Code: ' GET ORGSHP6 PICTURE '999AA'  
● 18,35 SAY 'Primary/Alternate: ' GET PA6 PICTURE 'A'  
● 19,3 SAY 'Organization/Shop Code: ' GET ORGSHP7 PICTURE '999AA'  
● 19,35 SAY 'Primary/Alternate: ' GET PA7 PICTURE 'A'  
● 20,3 SAY 'Organization/Shop Code: ' GET ORGSHP8 PICTURE '999AA'  
● 20,35 SAY 'Primary/Alternate: ' GET PA8 PICTURE 'A'

CLEAR GETS

CORRECT = ' '

DO WHILE .NOT. CORRECT# 'YyNn'

● 22,15

● 22,15 SAY 'Is this the correct record? (Y/N)' GET CORRECT

READ

ENDDO

IF UPPER(CORRECT) = 'N'

● 22,15

GOON = ' '

DO WHILE .NOT. GOON# 'YyNn'

● 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

● 22,15

ENDDO

IF UPPER(GOON) = 'N'

● 22,15 SAY 'Returning to Equipment Custodian List Main Menu'

CLEAR

RETURN  
ENDIF

LOOP  
ENDIF

DO WHILE .T.

- 7,3 SAY 'Grade (E5, O2, etc.): ' GET GRADE PICTURE 'A9'
- 8,3 SAY 'First Name: ' GET FNAME PICTURE 'AAAAAAAAAAAAAAAA'
- 9,3 SAY 'Middle Initial: ' GET MI PICTURE 'A'
- 10,3 SAY 'Last Name: ' GET LNAME PICTURE 'AAAAAAAAAAAAAAAAAAAA'
- 11,3 SAY 'Date Trained: ' GET TRINDT PICTURE '9999'
- 11,25 SAY 'Projected Departure Date: ' GET DPETDT PICTURE '9999'
- 12,3 SAY 'Primary Phone: ' GET PHONE1 PICTURE '9999'
- 12,25 SAY 'Alternate Phone: ' GET PHONE2 PICTURE '9999'
- 13,3 SAY 'Organization/Shop Code: ' GET ORGSHP1 PICTURE '999AA'
- 13,35 SAY 'Primary/Alternate: ' GET PA1 PICTURE 'A'
- 14,3 SAY 'Organization/Shop Code: ' GET ORGSHP2 PICTURE '999AA'
- 14,35 SAY 'Primary/Alternate: ' GET PA2 PICTURE 'A'
- 15,3 SAY 'Organization/Shop Code: ' GET ORGSHP3 PICTURE '999AA'
- 15,35 SAY 'Primary/Alternate: ' GET PA3 PICTURE 'A'
- 16,3 SAY 'Organization/Shop Code: ' GET ORGSHP4 PICTURE '999AA'
- 16,35 SAY 'Primary/Alternate: ' GET PA4 PICTURE 'A'
- 17,3 SAY 'Organization/Shop Code: ' GET ORGSHP5 PICTURE '999AA'
- 17,35 SAY 'Primary/Alternate: ' GET PA5 PICTURE 'A'
- 18,3 SAY 'Organization/Shop Code: ' GET ORGSHP6 PICTURE '999AA'
- 18,35 SAY 'Primary/Alternate: ' GET PA6 PICTURE 'A'
- 19,3 SAY 'Organization/Shop Code: ' GET ORGSHP7 PICTURE '999AA'
- 19,35 SAY 'Primary/Alternate: ' GET PA7 PICTURE 'A'
- 20,3 SAY 'Organization/Shop Code: ' GET ORGSHP8 PICTURE '999AA'
- 20,35 SAY 'Primary/Alternate: ' GET PA8 PICTURE 'A'
- 22,15 SAY 'Go ahead and make the necessary changes.'

READ

●22,15

\* Check For Correct Entry

CORRECT = ' '

DO WHILE .NOT. CORRECT# 'YyNn'

- 22,15 SAY 'Is This Correct? (Y/N)' GET CORRECT

READ

- 22,15

ENDDO

IF UPPER(CORRECT)='N'

GOON = ' '

DO WHILE .NOT. GOON# 'YyNn'

- 22,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON

READ

- 22,15

ENDDO

IF UPPER(GOON)='N'

- 22,15 SAY 'Returning to Equipment Custodian List Main Menu'

CLEAR

RETURN  
ENDIF

ENDDO  
ENDIF

MGRADE = GRADE  
MFNAME = FNAME  
MMI = MI  
MLNAME = LNAME  
MTRAINDT = TRAINDT  
MDPRTDT = DPRTDT  
MPHONE1 = PHONE1  
MPHONE2 = PHONE2  
MORGSH1 = ORGSH1  
MPA1 = PA1  
MORGSH2 = ORGSH2  
MPA2 = PA2  
MORGSH3 = ORGSH3  
MPA3 = PA3  
MORGSH4 = ORGSH4  
MPA4 = PA4  
MORGSH5 = ORGSH5  
MPA5 = PA5  
MORGSH6 = ORGSH6  
MPA6 = PA6  
MORGSH7 = ORGSH7  
MPA7 = PA7  
MORGSH8 = ORGSH8  
MPA8 = PA8

REPLACE GRADE WITH MGRADE  
REPLACE FNAME WITH MFNAME  
REPLACE MI WITH MMI  
REPLACE LNAME WITH MLNAME  
REPLACE TRAINDT WITH MTRAINDT  
REPLACE DPRTDT WITH MDPRTDT  
REPLACE PHONE1 WITH MPHONE1  
REPLACE PHONE2 WITH MPHONE2  
REPLACE ORGSH1 WITH MORGSH1  
REPLACE PA1 WITH MPA1  
REPLACE ORGSH2 WITH MORGSH2  
REPLACE PA2 WITH MPA2  
REPLACE ORGSH3 WITH MORGSH3  
REPLACE PA3 WITH MPA3  
REPLACE ORGSH4 WITH MORGSH4  
REPLACE PA4 WITH MPA4  
REPLACE ORGSH5 WITH MORGSH5  
REPLACE PA5 WITH MPA5  
REPLACE ORGSH6 WITH MORGSH6  
REPLACE PA6 WITH MPA6  
REPLACE ORGSH7 WITH MORGSH7  
REPLACE PA7 WITH MPA7  
REPLACE ORGSH8 WITH MORGSH8  
REPLACE PA8 WITH MPA8

```

* Check For Another Edit
  ANOTHER = .
  DO WHILE .NOT. ANOTHER$'YyNn'
    @22,15 SAY 'Update Another Record? (Y/N)' GET ANOTHER
    READ
    @ 22,15
  ENDDO

  IF UPPER (ANOTHER)='N'
    @22,15 SAY 'Equipment Custodian Main Menu'
    CLEAR
    RETURN
  ENDIF

ENDDO
ENDDO

* EOF: CUSEDT.PRG

*****

* Program.: CUSDEL.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Delete records from the Equipment Custodian List of the
*             Equipment Management Information System
*             Called from CUS.PRG

USE CUS

DO WHILE .T.

  DO NORECORD

  DO WHILE .T.
    * Initialize Memory Variables
    STORE 000 TO MCUSNR
    STORE SPACE(20) TO MLNAME
    STORE SPACE(15) TO MFNAME
    STORE SPACE(1) TO MMI
    STORE 0000 TO MTRAINDT
    STORE 0000 TO MDPRTDT
    STORE SPACE(2) TO MGRADE
    STORE 0000 TO MPHONE1
    STORE 0000 TO MPHONE2
    STORE SPACE(1) TO MPA1
    STORE SPACE(1) TO MPA2
    STORE SPACE(1) TO MPA3
    STORE SPACE(1) TO MPA4
    STORE SPACE(1) TO MPA5
    STORE SPACE(1) TO MPA6
    STORE SPACE(1) TO MPA7
    STORE SPACE(1) TO MPA8
    STORE SPACE(5) TO MORGSHP1

```

STORE SPACE(5) TO MORGSHP2  
 STORE SPACE(5) TO MORGSHP3  
 STORE SPACE(5) TO MORGSHP4  
 STORE SPACE(5) TO MORGSHP5  
 STORE SPACE(5) TO MORGSHP6  
 STORE SPACE(5) TO MORGSHP7  
 STORE SPACE(5) TO MORGSHP8

DO WHILE .T.

\* Draw Screen

CLEAR

● 1,4 TO 3,74  
 ● 2,6 SAY 'EQUIPMENT CUSTODIAN DELETE'  
 ● 2,58 SAY 'ROUTINE'  
 ● 4,1 TO 20,77 DOUBLE  
 ● 7,3 SAY 'Grade (E5, O2, etc.): '  
 ● 7,30 SAY 'Custodian Number: '  
 ● 8,3 SAY 'First Name: '  
 ● 9,3 SAY 'Middle Initial: '  
 ● 10,3 SAY 'Last Name: '  
 ● 11,3 SAY 'Date Trained: '  
 ● 11,25 SAY 'Projected Departure Date: '  
 ● 12,3 SAY 'Primary Phone: '  
 ● 12,25 SAY 'Alternate Phone: '  
 ● 13,3 SAY 'Organization/Shop Code: '  
 ● 13,35 SAY 'Primary/Alternate: '  
 ● 14,3 SAY 'Organization/Shop Code: '  
 ● 14,35 SAY 'Primary/Alternate: '  
 ● 15,3 SAY 'Organization/Shop Code: '  
 ● 15,35 SAY 'Primary/Alternate: '  
 ● 16,3 SAY 'Organization/Shop Code: '  
 ● 16,35 SAY 'Primary/Alternate: '  
 ● 17,3 SAY 'Organization/Shop Code: '  
 ● 17,35 SAY 'Primary/Alternate: '  
 ● 18,3 SAY 'Organization/Shop Code: '  
 ● 18,35 SAY 'Primary/Alternate: '  
 ● 19,3 SAY 'Organization/Shop Code: '  
 ● 19,35 SAY 'Primary/Alternate: '  
 ● 20,3 SAY 'Organization/Shop Code: '  
 ● 20,35 SAY 'Primary/Alternate: '

\* Input Custodian Number

● 22,15 SAY 'Enter Custodian Number' GET MCUSNR PICTURE '999'  
 READ

\* Search For Requested Custodian Number

LOCATE FOR CUSNR = MCUSNR

IF .NOT. FOUND()

\* Custodian Number Is Not In The Log

● 22,15

● 22,15 SAY 'Custodian Number' GET MCUSNR PICTURE '999'

● 22,36 SAY 'cannot be found.'

CLEAR GETS

GOON = ' '

```

DO WHILE .NOT. GOON*'YyNn'
  ● 23,15 SAY 'Would You Like To Continue? (Y/N)' GET GOON
  READ
ENDDO

IF UPPER(GOON)='N'
  ●23,15 SAY 'Returning to Equipment Custodian List Main Menu'
  CLEAR
  RETURN
ENDIF

CLEAR
LOOP
ENDIF

* If Record Is Located, Display Data
CLEAR
● 6,0 to 21,77
● 7,30 SAY 'Custodian Number: ' GET MCUSNR PICTURE '999'
● 7,3 SAY 'Grade (E5, O2, etc.): ' GET GRADE PICTURE 'A9'
● 8,3 SAY 'First Name: ' GET FNAME PICTURE 'AAAAAAAAAAAAAAAA'
● 9,3 SAY 'Middle Initial: ' GET MI PICTURE 'A'
● 10,3 SAY 'Last Name: ' GET LNAME PICTURE 'AAAAAAAAAAAAAAAAAAAA'
● 11,3 SAY 'Date Trained: ' GET TRAIENDT PICTURE '9999'
● 11,25 SAY 'Projected Departure Date: ' GET DPRTDT PICTURE '9999'
● 12,3 SAY 'Primary Phone: ' GET PHONE1 PICTURE '9999'
● 12,25 SAY 'Alternate Phone: ' GET PHONE2 PICTURE '9999'
● 13,3 SAY 'Organization/Shop Code: ' GET ORGSHP1 PICTURE '999AA'
● 13,35 SAY 'Primary/Alternate: ' GET PA1 PICTURE 'A'
● 14,3 SAY 'Organization/Shop Code: ' GET ORGSHP2 PICTURE '999AA'
● 14,35 SAY 'Primary/Alternate: ' GET PA2 PICTURE 'A'
● 15,3 SAY 'Organization/Shop Code: ' GET ORGSHP3 PICTURE '999AA'
● 15,35 SAY 'Primary/Alternate: ' GET PA3 PICTURE 'A'
● 16,3 SAY 'Organization/Shop Code: ' GET ORGSHP4 PICTURE '999AA'
● 16,35 SAY 'Primary/Alternate: ' GET PA4 PICTURE 'A'
● 17,3 SAY 'Organization/Shop Code: ' GET ORGSHP5 PICTURE '999AA'
● 17,35 SAY 'Primary/Alternate: ' GET PA5 PICTURE 'A'
● 18,3 SAY 'Organization/Shop Code: ' GET ORGSHP6 PICTURE '999AA'
● 18,35 SAY 'Primary/Alternate: ' GET PA6 PICTURE 'A'
● 19,3 SAY 'Organization/Shop Code: ' GET ORGSHP7 PICTURE '999AA'
● 19,35 SAY 'Primary/Alternate: ' GET PA7 PICTURE 'A'
● 20,3 SAY 'Organization/Shop Code: ' GET ORGSHP8 PICTURE '999AA'
● 20,35 SAY 'Primary/Alternate: ' GET PA8 PICTURE 'A'
CLEAR GETS

CORRECT = ' '
DO WHILE .NOT. CORRECT*'YyNn'
  ● 22,15
  ● 22,15 SAY 'Is this the correct record? (Y/N)' GET CORRECT
  READ
ENDDO

IF UPPER(CORRECT)='N'
  ● 22,15
  GOON = ' '

```

```

DO WHILE .NOT. GOON#`YyNn`
  ● 22,15 SAY `Would You Like To Continue? (Y/N)` GET GOON
  READ
  ● 22,15
ENDDO

IF UPPER(GOON)='N'
  ●22,15 SAY `Returning to Equipment Custodian List Main Menu`
  CLEAR
  RETURN
ENDIF

LOOP
ENDIF

MCCORRECT = ' '

DO WHILE .NOT. MCCORRECT#`YyNn`
  ●22,15
  ●22,15 SAY `Are you sure that you want to delete this record? (Y/N)`;
  GET MCCORRECT
  READ
ENDDO

IF UPPER(MCCORRECT)='N'
  ●23,15 SAY `This record will not be deleted.`
  DO PAUSE
  ●22,15
  ●23,15
  MGOON = ' '

DO WHILE .NOT. MGOON#`YyNn`
  ● 22,15 SAY `Would You Like To Continue? (Y/N)` GET MGOON
  READ
  ● 22,15
ENDDO

IF UPPER(MGOON)='N'
  ●22,15 SAY `Returning to Equipment Custodian List Main Menu`
  CLEAR
  RETURN
ENDIF
ENDDO
ENDIF
DELETE ALL FOR CUSNR = MCUSNR
PACK

* Check for another delete
MANOTHER = ' '
DO WHILE .NOT. MANOTHER#`YyNn`
  ●22,15
  ●22,15 SAY `This record has been deleted.`
  ●23,15 SAY `Would you like to delete another record? (Y/N)`;
  GET MANOTHER

```

```

DO PAUSE
READ
@22,15
@23,15
ENDDO

IF UPPER (MANOTHER)='N'
  @22,15 SAY 'Returning To Equipment Custodian List Main Menu'
  CLEAR
  RETURN
ENDIF

ENDDO
ENDDO

* EOF: CUSDEL.PRG

*****

* Program.: CUSRPT.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Create Reports from the Equipment Custodian List
*           Called from CUS.PRG

USE CUS

DO MORECORD

DO WHILE .T.
  TODAY=DATE()
  CLEAR

  @ 1,5 TO 3,77
  @ 2,7 SAY 'EQUIPMENT CUSTODIAN REPORTS'
  @ 2,63 SAY 'ROUTINE'
  @ 4,1 TO 21,77 DOUBLE
  @ 5,25 SAY 'DATE' TIME
  @ 6,23 SAY TODAY
  @ 6,39 SAY TIME()
  @ 8,20 SAY '[A] All Custodians'
  @ 10,20 SAY '[B] By Training Date'
  @ 12,20 SAY '[C] By Custodian Name'
  @ 14,20 SAY '[D] By Organization and Shop Code'
  @ 16,20 SAY '[H] Help - How To Use The Reports System'
  @ 18,20 SAY '[Q] Quit'
  @ 23,8 SAY '[Enter Selection (A - D, H for help, or Q to quit) : ]'

  I=0
  DO WHILE I=0
    I=INKEY()
    @ 6,39 SAY TIME()
    @ 23,60 SAY ''
    IF UPPER(CHR(I))# 'ABCDHQ'
      EXIT
    
```

ENDIF

I=0  
ENDDO

● 23,60 SAY UPPER(CHR(I))

\* Input Printer/Screen Request  
J = 251

DO CASE

CASE CHR(I) # 'Qq'  
SAVE TO CUS.MEM  
CLEAR ALL  
CLEAR  
CLOSE DATABASES  
RETURN

CASE CHR(I) # 'Aa'  
● 8,18 SAY CHR(J)  
DO PAUSE  
DO CUSRPTA

CASE CHR(I) # 'Bb'  
●10,18 SAY CHR(J)  
DO PAUSE  
DO CUSRPTB

CASE CHR(I) # 'Cc'  
●12,18 SAY CHR(J)  
DO PAUSE  
DO CUSRPTC

CASE CHR(I) # 'Dd'  
●14,18 SAY CHR(J)  
DO PAUSE  
DO CUSRPTD

CASE CHR(I) # 'Hh'  
●16,18 SAY CHR(J)  
DO CUSRPTH

ENDCASE

ENDDO

\* EOF: CUSRPT.PRG

\*\*\*\*\*

\* Program.: CUSRPTA.PRG  
\* Author...: Capt Jeff Bailey  
\* Last Revision: 9 August 1988  
\* Notes....: Create a report containing all custodians in the Equipment

```
*          Custodian List
*          Called from CUSRPT.PRG
```

```
USE CUS
```

```
DO WHILE .T.
```

```
  * Input Printer/Screen Request
  J = 251
  @ 8,18 SAY CHR(J)
  PRINTER = ' '
  CLEAR
```

```
TEXT
```

This report will provide a list of all of the custodians in the Equipment Custodian List.

```
ENDTEXT
```

```
DO WHILE .NOT. PRINTER#`PpSsQq`
  @22,15 SAY `Send Output To Printer or Screen (P/S, or Q to quit)?`;
  GET PRINTER
  READ
ENDDO
```

```
CLEAR
```

```
IF UPPER(PRINTER) = `Q`
  SAVE TO CUS.MEM
  CLEAR ALL
  CLEAR
  CLOSE DATABASES
  RETURN
ENDIF
```

```
IF UPPER(PRINTER) = `S`
```

```
TEXT
```

Most reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

```

ENDTEXT

WAIT
CLEAR
REPORT FORM CUSRPTA.FRM TO SCREEN
WAIT
ENDIF

IF UPPER(PRINTER)='P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM CUSRPTA.FRM TO PRINT
ENDIF

CLEAR

RETURN

ENDDO

* EOF: CUSRPTA.PRG

*****

* Program.: CUSRPTB.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Create a report of records in the Equipment Custodian
*             List with custodian training dates between user
*             specified beginning and ending dates
*             Called from CUSRPT.PRG

USE CUS

DO WHILE .T.
  * Input Printer/Screen Request
  J = 251
  @ 10,18 SAY CHR(J)
  PRINTER = ' '
  CLEAR

TEXT

```

This report will provide a list of all of the custodians in the Equipment Custodian List who were trained on or after the beginning date you specify and on or before the ending date you specify.

ENDTEXT

\* Initialize Memory Variables  
STORE 0000 TO MTRAINB  
STORE 0000 TO MTRAINE

\* Input Report Dates  
@ 20,15 SAY 'Enter Beginning Julian Date Of Report';  
GET MTRAINB PICTURE '9999'  
@ 22,15 SAY 'Enter Ending Julian Date of Report';  
GET MTRAINE PICTURE '9999'  
READ

SET FILTER TO TRAINDT >= MTRAINB .AND. TRAINDT <= MTRAINE  
GO TOP

CLEAR

DO WHILE .NOT. PRINTER# 'PpSsQq'  
@22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';  
GET PRINTER  
READ  
ENDDO

CLEAR

IF UPPER(PRINTER)='Q'  
SAVE TO CUSRPT.MEM  
CLEAR ALL  
CLEAR  
CLOSE DATABASES  
RETURN  
ENDIF

IF UPPER(PRINTER)='S'

TEXT

Most reports are longer than one screen. Therefore, they will  
scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

```

ENDTEXT

WAIT
CLEAR
REPORT FORM CUSRPTB.FRM TO SCREEN
WAIT
ENDIF

IF UPPER(PRINTER)='P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM CUSRTPB.FRM TO PRINT
ENDIF

CLEAR
RETURN

ENDDO

* EOF: CUSRPTB.PRG

*****

* Program.: CUSRPTC.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Create a report listing information on a user specified
*             equipment custodian
*             Called from CUSRPT.PRG

USE CUS

DO WHILE .T.
  * Input Printer/Screen Request
  J = 251
  @ 12,18 SAY CHR(J)
  PRINTER = ' '
  CLEAR

  * Initialize Memory Variables
  STORE SPACE(15) TO MFNAME
  STORE SPACE(20) TO MLNAME

TEXT

```

This report will provide information on a user specified equipment custodian. It is very important that you spell the custodian's first and last name exactly as it is spelled in the database. Note also that, if there are two custodians with the same first and last name, the report will provide

information on both.

ENDTEXT

\* Input Name

● 18,15 SAY 'First Name: ' GET MFNAME PICTURE 'XXXXXXXXXXXXXX'

● 20,15 SAY 'Last Name: ' GET MLNAME PICTURE 'XXXXXXXXXXXXXXXXXX'

READ

SET FILTER TO FNAME = UPPER(MFNAME) .AND. LNAME = UPPER(MLNAME)

GO TOP

CLEAR

DO WHILE .NOT. PRINTER# 'PpSsQq'

● 22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';

GET PRINTER

READ

ENDDO

CLEAR

IF UPPER(PRINTER) = 'Q'

SAVE TO CUSRPT.MEM

CLEAR ALL

CLEAR

CLOSE DATABASES

RETURN

ENDIF

IF UPPER(PRINTER) = 'S'

TEXT

Most reports are longer than one screen. Therefore, they will scroll up the screen until the end of the report is reached.

To STOP the report as it scrolls up the screen type

<CONTROL S>

To START the report scrolling again type

<RETURN>

ENDTEXT

WAIT

```

CLEAR
REPORT FORM CUSRPTC.FRM TO SCREEN
WAIT
ENDIF

IF UPPER(PRINTER)='P'
CLEAR
WAIT 'Ready printer and press <RETURN>'
REPORT FORM CUSRPTC.FRM TO PRINT
ENDIF

CLEAR

RETURN

ENDDO

* EOF: CUSRPTC.PRG

*****

* Program.: CUSRPTD.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: Create a report of custodians in the Equipment
*             Custodian List responsible for a user specified
*             Organization and Shop Code
*             Called from CUSRPT.PRG

USE CUS

DO WHILE .T.

    * Input Printer/Screen Request
    J = 251
    @ 14,18 SAY CHR(J)
    PRINTER = ' '
    CLEAR

    TEXT

    This report will provide a list of the custodians in the
    Equipment Custodian List responsible for the organization
    and shop code you specify.

    ENDTEXT

    * Initialize Memory Variable
    STORE SPACE(5) TO MORGSHP

```

```

* Input Organization/Shop Code
@ 20,15 SAY 'Enter desired Organization and Shop Code';
GET MORGSHP PICTURE '999AA'
READ
SET FILTER TO ORGSHP1 = UPPER(MORGSHP)
GO TOP
CLEAR

DO WHILE .NOT. PRINTER# 'PpSsQq'
  @22,15 SAY 'Send Output To Printer or Screen (P/S, or Q to quit)?';
  GET PRINTER
  READ
ENDDO

CLEAR

IF UPPER(PRINTER) = 'Q'
  SAVE TO CUSRPTD.MEM
  CLEAR ALL
  CLEAR
  CLOSE DATABASES
  RETURN
ENDIF

IF UPPER(PRINTER) = 'S'

  CLEAR
  REPORT FORM CUSRPTD.FRM TO SCREEN
  WAIT
ENDIF

IF UPPER(PRINTER) = 'P'
  CLEAR
  WAIT 'Ready printer and press <RETURN>'
  REPORT FORM CUSRPTD.FRM TO PRINT
ENDIF

CLEAR
RETURN
ENDDO

* EOF: CUSRPTD.PRG

*****

* Program.: CUSRPTH.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: HELP for the Equipment Custodian List Reports
*           Module of the Equipment Management Information System
*           Called From CUSRPT.PRG

CLEAR

```

TEXT

Welcome to the Equipment Custodian List reports module of the Equipment Management Information System. This module will provide you with information needed to ensure equipment custodians assigned to manage equipment accounts meet the requirements of AFM 67-1.

Currently, this module provides the following reports:

```
*****
*
*           All Custodians In The Log           *
*
*           Custodians By Training Date         *
*
*           Custodian By Name                   *
*
*           Custodians By Organization And Shop Code *
*
*****
```

The requirement to maintain and manage certain information concerning equipment custodians is contained in AFM 67-1, Vol II, Part 2, Ch 22, Para 29.

ENDTEXT

WAIT SPACE(11) + 'Press any key to return to the Equipment Custodian';  
' List Menu.'

CLEAR

RETURN

\* EOF: CUSRPTH.PRG

\*\*\*\*\*

```
* Program.: CUSHLP.PRG
* Author...: Capt Jeff Bailey
* Last Revision: 9 August 1988
* Notes....: HELP for the Equipment Custodian List Module
*           of the Equipment Management Information System
*           Called From CUS.PRG
```

CLEAR

TEXT

Welcome to the Equipment Custodian List module of the Equipment Management Information System. This module will assist you in maintaining up-to-date equipment custodian information on the microcomputer. It allows you to add, update, and delete your entries to the list. It also can provide you with several reports for managing the equipment custodian list.

Currently, this module supports the following tasks:

```
*****
*                                     *
*      Add Custodians To The List    *
*                                     *
*      Update Custodian Information  *
*                                     *
*      Delete Custodians From The List *
*                                     *
*              Process Reports        *
*                                     *
*****
```

The requirement to maintain and manage certain information concerning equipment custodians is contained in AFM 67-1, Vol II, Part 2, Ch 22, Para 29.  
ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

```
*****
```

From the Equipment Custodian List menu, press the following letters to begin working:

To ADD custodians to the Equipment Custodian List press [A]

To UPDATE records in the Equipment Custodian List press [B]

To DELETE custodians from the Equipment Custodian List press [C]

To run a REPORT on the Equipment Custodian List press [D]

To QUIT using the system press [Q]

```
*****
```

ENDTEXT

WAIT SPACE(20) + 'Press any key to see more HELP.'

CLEAR

TEXT

The data elements used in the Equipment Custodian List are listed below. The template can be interpreted as follows: A '9'

means a number is required, an 'A' means a letter is required, and an 'X' means either a number or a letter is allowed.

Common Name	Width	Template
Grade	2	A9
First Name	15	AAAAAAAAAAAAAAAA
Middle Initial	1	A
Last Name	20	AAAAAAAAAAAAAAAAAAAA
Date Trained	4	9999
Projected Departure Date	4	9999
Primary Extension	4	9999
Alternate Extension	4	9999
Organization/Shop Code	5	999AA
Primary/Alternate	1	A

In addition, each record input to the log is assigned a three-digit custodian number by the system.

ENDTEXT

WAIT SPACE(11) + 'Press any key to return to the Equipment Custodian ';  
'List menu.'

CLEAR

RETURN

\* EOF: CUSHLP.PRG

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After commissioning, he served as Materiel Management Officer for 3800 ABG/LGS at Maxwell AFB, Alabama. He was transferred to Soesterberg AB, The Netherlands in November 1981. While at Soesterberg, Captain Bailey served as the Customer Support Officer and then Management and Procedures Officer for 32TFS/LGS. He received a Master of Public Administration Degree from Auburn University at Montgomery in February 1982. In 1984, as a result of his work at Soesterberg AB and while on temporary duty in the Command Equipment Management Office at Ramstein Air Base, he was named the United States Air Forces in Europe (USAFE) Company Grade Supply Officer of the Year.

He was transferred to Headquarters Air Force Logistics Command in November 1984. While there, he worked in the Requirements Data Bank functional system program office as the Chief of Training and Economic Analysis, and also was segment chief for the C017 Special Tooling/Special Test Equipment software. He entered the School of Systems and Logistics, Air Force Institute of Technology, in June of 1987.

[REDACTED]

AD A252 629

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S) AFIT/GLM/LSM/88S-1			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION School of Systems and Logistics		6b. OFFICE SYMBOL (if applicable) AFIT/LSM	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code) Air Force Institute of Technology (AU) Wright-Patterson AFB, OH 45433-6583			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING/SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (if applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8c. ADDRESS (City, State, and ZIP Code)					
			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
11. TITLE (Include Security Classification) AUTOMATING THE AIR FORCE RETAIL-LEVEL EQUIPMENT MANAGEMENT PROCESS: AN APPLICATION OF MICROCOMPUTER-BASED INFORMATION SYSTEMS TECHNIQUES					
12. PERSONAL AUTHOR(S) Jeffrey Bailey, B.A., M.P.A., Captain, USAF					
13a. TYPE OF REPORT MS THESIS		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, Month, Day) 1988 September	
15. PAGE COUNT 252					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)  DATA BASE                      INFORMATION SYSTEMS DATA MANAGEMENT        MANAGEMENT INFORMATION SYSTEMS MICROCOMPUTERS		
FIELD	GROUP	SUB-GROUP			
12	05				
05	02				
19. ABSTRACT (Continue on reverse if necessary and identify by block number)  Thesis Advisor: John M. Halliday, Lieutenant Colonel, USAF  Assist Prof of Logistics Mgt  <i>Approved for public release IAW AFR 190-1.</i>  WILLIAM A. MAUER  17 Oct 88 Associate Dean School of Systems and Logistics Air Force Institute of Technology (AU) Wright-Patterson AFB OH 45433					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL Lt Col John M. Halliday			22b. TELEPHONE (Include Area Code) (513) 255-5023		22c. OFFICE SYMBOL AFIT/LSM

UNCLASSIFIED

ABSTRACT

Microcomputer-based database management systems can reduce training times and error rates on administrative tasks. Workers in many organizations could use the assistance of a microcomputer-based management information system. However, adequate system design and development requires an in-depth knowledge of the tasks to be automated, and can require hundreds, even thousands, of hours to complete. Often, technicians assigned to a work area do not have the knowledge or time to devote to the design and development of an information system. One such work area is the Equipment Management Section in the Air Force base supply organization. The purpose of this study was to apply principles of database management to the management of equipment items, with the ultimate goal being a reduction in error rates and training times.

The study was conducted using the seven stages of information systems design discussed in Analysis and Design of Information Systems by James Senn, (New York: McGraw-Hill, 1984). These stages require a thorough examination of the problem and problem environment prior to design and development of the information system. Accordingly, five research questions designed to help the researcher gain a thorough understanding of the Equipment Management Section and the environment in which it functions were asked and answered. Then, a management information system was designed, developed, and tested.

The management information system is called the Equipment Management Information System (EMIS). EMIS automates four tasks formerly accomplished manually. The tasks are the Air Force Form 600 Control Log, Tables of Allowances Review List, Configuration Data/Resume File, and the Equipment Custodian List. Air Force Logistics Management Center Directorate of Supply personnel have agreed to validate EMIS and distribute it to interested major commands.

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